

# FLIGHT

The  
AIRCRAFT  
ENGINEER  
&  
AIRSHIPS

First Aero Weekly in the World

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport

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## Flight

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## DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

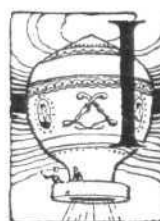
1925

- July 26-Aug. 9 Vanville Light 'Plane and Glider Meeting.  
Aug. 1-3 .... Royal Aero Club Race Meeting at Lympne.  
Sept. 19-28 F.I.A. Conference at Prague.  
Oct. 8 .... Aero Golfing Soc. Autumn Meeting, Walton Heath.  
Oct. 24-29 Schneider Cup Race, Baltimore, U.S.A.

1926

- Aug. .... Light Aeroplane Competition.

## EDITORIAL COMMENT.



IF the Royal Aero Club's August Race Meeting has done nothing else, it has demonstrated the fact that very great progress has been made in the development of engines suitable for light 'planes. Whereas in last year's Lympne competitions, engine trouble was the order of the day, the small engines this year gave surprisingly little trouble, especially when it is realised that with the length of races arranged for this year's meeting the demand upon engines was very heavy indeed, some of them having to fly at least three sets of 100 miles each at full power. First honours must obviously go to the Bristol "Cherub" which, although it was employed on a very large proportion of the machines, in very few cases let its pilot down. The failures are virtually reduced almost to nil if one excepts the geared "Cherub" fitted in Haig's "Pixie III," and all the direct drive Cherubs stood up to their work in a highly creditable manner.

The British Anzani engine also must be said to be a vast improvement over last year's engine. Although this year's model is essentially the same, certain changes have been made in design which have obviously had a most beneficial influence on the reliability, and it can be said that any trouble besetting machines fitted with this engine were not really to be ascribed to the engine at all.

Another engine which did extremely well was the Blackburne fitted in the Parnall "Pixie II." This machine was flown by Courtney in the second heat and final of the Light 'Plane Holiday Handicap, the Single-Seater Scratch Speed Race, Certified Speeds over 50 km. and 3 km., 100 miles in the International Handicap, and another 100 miles in the Grosvenor Race. All these were flown at full power, so that the strain on the engine was a very severe one.

Compared with last year these results are extremely gratifying and, incidentally, they make one begin to wonder whether after all we were not in rather

too much of a hurry about increasing the size of engine for light 'plane work. Concerning the machines themselves there is little to be said as they were, with one exception, last year's types, the qualities of which have never been in doubt. The relatively poor results given last year by these machines were almost very largely due to unreliable engines, and now that this weakness has been remedied the machines really got an opportunity of showing what they could do. The only new machine entered for the various races, the Cranwell C.L.A.3, only secured one first prize, but the machine, nevertheless, amply justified its designer and pilot, Flight-Lieut. Comper, who, once he got used to his mount, handled it with extraordinarily great skill and seemed to be getting the last ounce out of it. His failure to secure more than the one first prize may perhaps be ascribed in a measure to handicapping, although several times he came very near winning. The machine itself is a very highly creditable effort, and the Cranwell Light 'Plane Club is to be congratulated not only upon their machine and its designer, but upon their excellent sporting spirit, which enabled the machine to be built and flown.

Another amateur machine which did well in the competitions was the Farnborough "Hurricane," piloted by Chick, and among other successes won first prize in the Grosvenor Challenge Cup race. The fitting of the Bristol "Cherub" engine seems to have improved the machine out of all recognition.

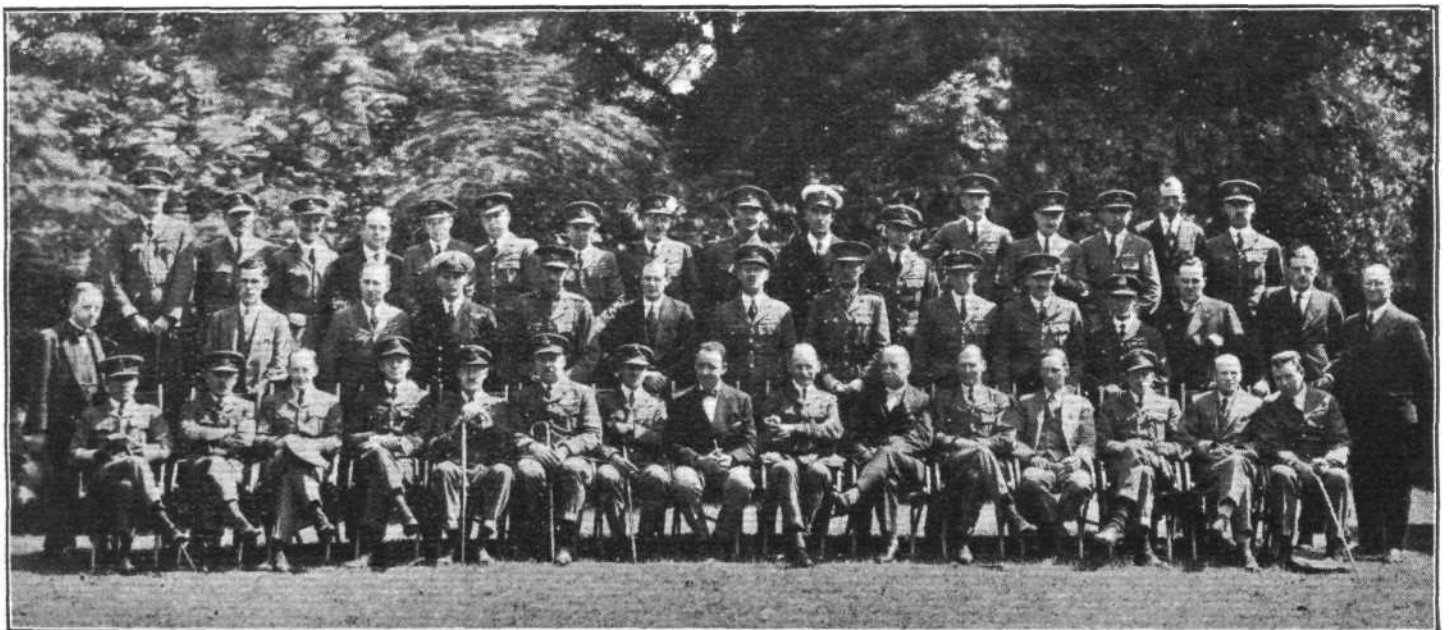
It is rather significant that on the whole amateur designers have been very successful at Lympne this year, which tends to show what keenness and determination can really do. It should be recollected that in nearly all cases amateur efforts have been greatly hampered by lack of funds, and that mostly it is a matter of very considerable personal sacrifice on the part of all concerned to make the entering and flying of a machine at all possible.

As regards the meeting itself, it was on the whole very interesting, although it cannot be denied that there were dull "patches." The Certified Perform-

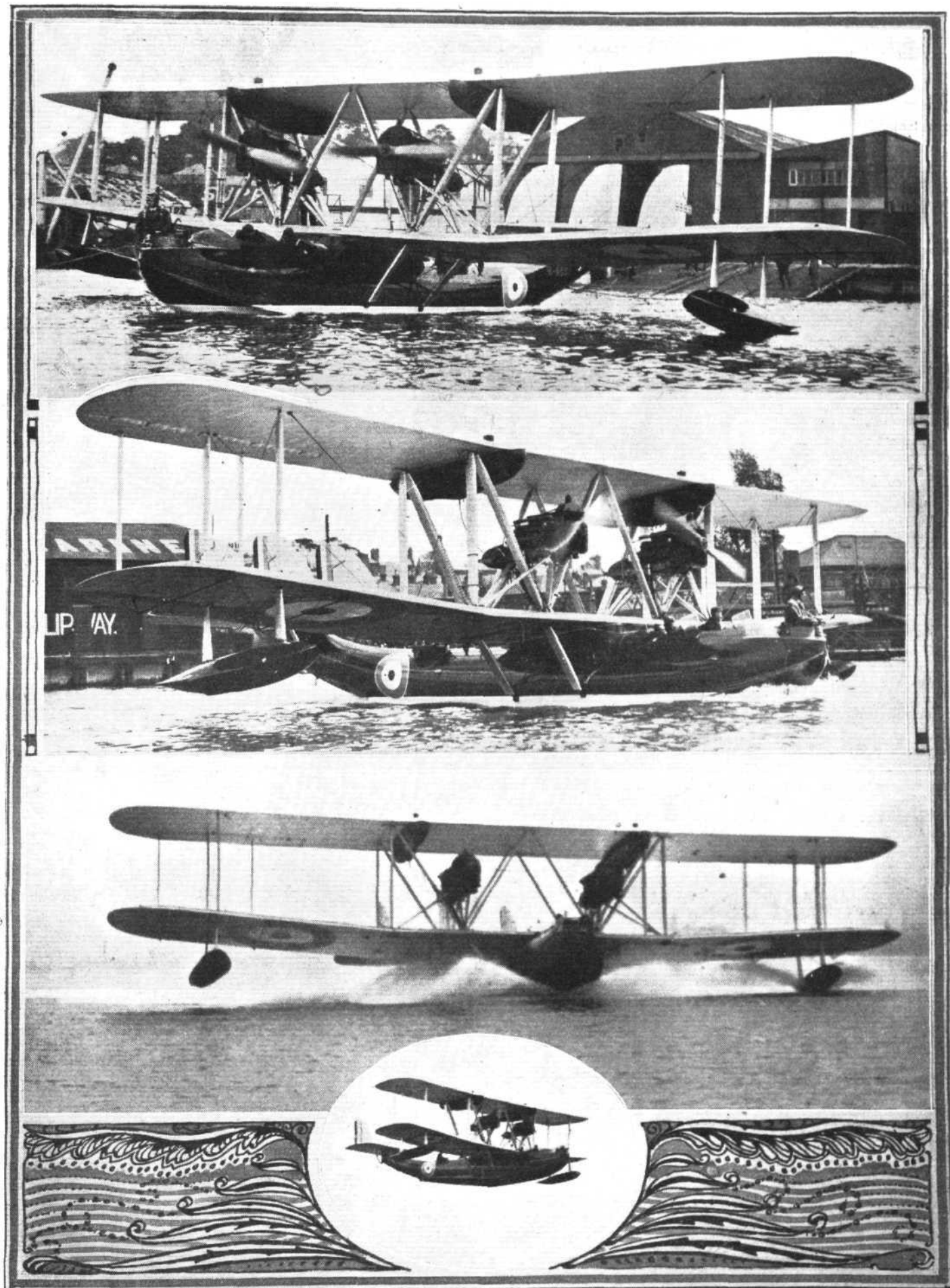
ances on Sunday last were not calculated to entertain the general public to a great extent, but the afternoon was relieved by private challenge races between various machines, and this form of racing proved perhaps the most interesting of all from the point of view of the public, and might with advantage be further encouraged at future meetings.

Against Monday's programme it might be argued that it was too long and that it was difficult to sustain the interest throughout the day, although in themselves the various races were very good and provided some exciting sport, machines being repeatedly bunched together around the aerodrome turning point. Not only was it difficult to sustain the interest but the strain on the pilots was undoubtedly very severe. It is one thing to fly across country for distances of 100 miles at a stretch, but quite a different thing to fly 100 miles over a 12½-mile circuit, where pilots have to be on the alert the whole time taking advantage of every opportunity that offers.

The choice of Lympne as the venue for the meeting has been criticised on the score that Lympne is somewhat out of the way in relation to London—plus the handicap of the Southern Railway. The attendance during the three days, while not being as large as would probably have been the case at one of the London aerodromes, was by no means hopeless, although it must be admitted that a very large percentage of the visitors were more or less directly interested in aviation. It should not be impossible to arrange for one or two Saturday meetings at Hendon or Croydon a little later, and since the Lympne meeting has now shown that the engines available are sufficiently reliable to enable races to be flown around pylons, as used to be done at Hendon before the War, this form of racing with its demand for much personal skill on the part of the pilot might be encouraged. From the manner in which the light 'planes were handled at Lympne it is obvious that there would be no difficulty in taking them around the old pylons course at Hendon.



**STAFF OFFICERS AT FILTON :** Our photograph shows members of the R.A.F. Staff College at Andover on a recent visit of inspection to the Bristol Aeroplane Company's Aircraft and Aero Engine Works at Filton. Air Vice-Marshal Brooke-Popham is in the centre, seated between Sir Henry White Smith and Mr. H. J. Thomas



THE SUPERMARINE "SOUTHAMPTON": Our photographs show the machine in various attitudes, from rest on the sea to free flight. The "Southampton," which is fitted with two Napier "Lion" engines, has now gone into quantity production, but at present no details concerning it may be published.

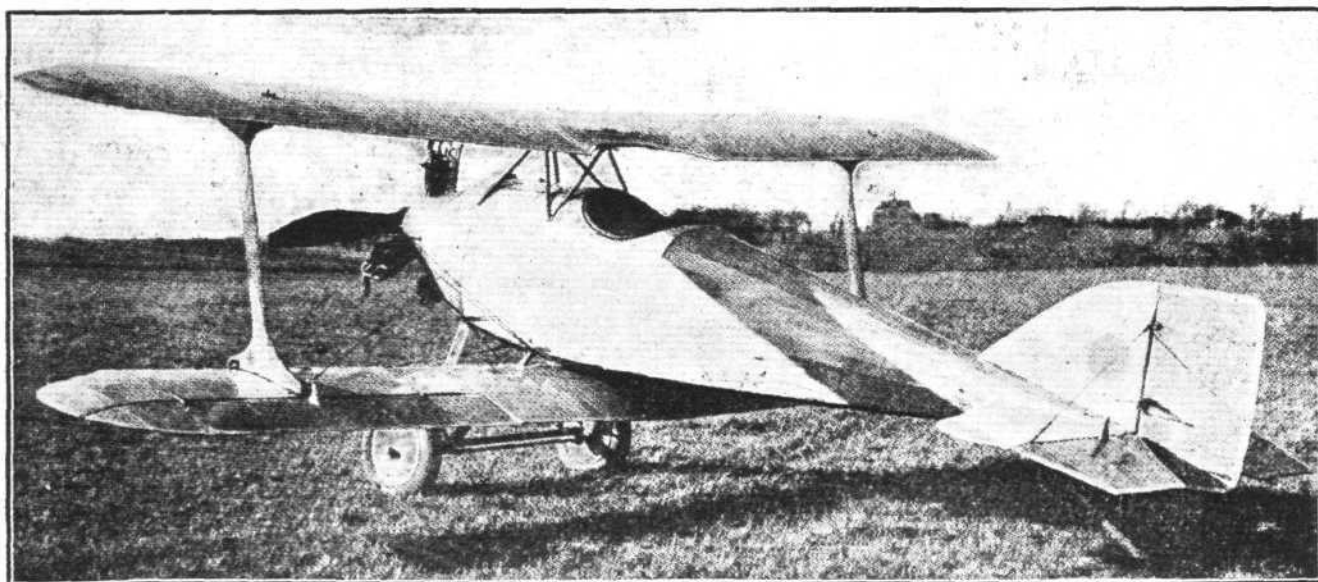
# THE LINCOLN STANDARD LIGHT 'PLANE

SOME little time ago the Lincoln Standard Aircraft Corporation of Lincoln, Neb., U.S.A.—a firm that has done a considerable amount of pioneer work in the development of commercial aircraft in America—produced, under the supervision of Mr. S. Swanson, of Vermillion, S. Dakota (the Chief Engineer), a neat little machine of the advanced light 'plane class.

In general design this machine is very similar to the "Sport 'Plane," fitted with a 28 h.p. 2-cyl. opposed Lawrence engine (air-cooled), constructed by Mr. Swanson in 1922 (described in *FLIGHT* for May 17, 1923) and the

spars. The planes are easily removed and erected—in fact, the machine may be dismantled ready for crating or storage in less than 30 minutes, by the removal of only seven bolts. The entire tail unit is of welded steel tubing, and the various surfaces are of generous proportions. The wing section employed is the U.S.A. 27, and the top plane is given  $1\frac{1}{2}$  degrees incidence—the lower plane having none.

The fuselage, which is, we believe, of the spruce-ash girder type as before, is of very fine streamline form, of ample proportions at the cockpit just aft of the rear-wing spars, and tapering sharply to a horizontal knife-edge—almost a



The Lincoln Standard Light 'Plane: A smart little single-seater fitted with a 30 h.p. 3-cyl. air-cooled Anzani engine.

larger "Swanson-Freeman" two-seater model, 80 h.p. Le Rhone, built towards the end of 1923 (described in *FLIGHT* for February 28, 1924). The new machine, however, embodies several constructional modifications in detail, which, no doubt, result from past experience and general advance in aircraft practice.

While there is nothing out of the ordinary in the design of this machine, it nevertheless possesses several noteworthy features, and its performance is remarkably good. It is a single seater, single-bay tractor biplane, fitted with a 3-cyl. radial air-cooled Anzani engine, of 30-35 h.p. Mr. Ray Page, President of the Lincoln Standard Corporation, has stated that he places little reliance on motor-cycle type engines, and he believes that this small job, neatly built-up around a new-type 3-cyl. 30-35 h.p. Anzani engine, gives a performance pleasing to those seeking a sturdy light 'plane where economy and dependable operation are the main requisites.

Both top and bottom planes, each 20 ft. in span, are built in continuous units from tip to tip, the main spars being spliced in the centre, at which point they are bent to a 4-degree dihedral. They are separated by a single I interplane strut, each side of the fuselage, while the centre of the top plane is supported above the fuselage by three pairs of inverted V-struts—a pair for each of the main spars, and the third pair forming a diagonal bracing between the other two.

Ailerons are fitted to the lower plane only, with the operating cables concealed in the lower part of the interplane I struts. The lower plane, it will be noticed, passes underneath the fuselage, to which it is attached at the centre of the main

point—at the rear. Except for the engine portion and the top deck over the cockpit, the fuselage is fabric-covered, numerous stringers maintaining the streamline form. The fabric used for the fuselage and other surfaces is grade A linen, given five coats of new nitrate dope and finished with Valspar.

A conventional V-type undercarriage, with rubber sprung axle, is fitted, attached direct to the fuselage, forward and entirely free of the lower plane.

The principal characteristics of the new Lincoln-Swanson light 'plane are:—

Span	..	..	..	..	20 ft.
Chord	..	..	..	..	2 ft. 10 ins.
Gap	..	..	..	..	3 ft. 4 ins.
Stagger	..	..	..	..	1 ft. 3 ins.
O.A. length	..	..	..	..	16 ft.
O.A. height	..	..	..	..	5 ft. 7 ins.
Area of main planes	..	..	..	..	108 sq. ft.
Area of ailerons	..	..	..	..	12 sq. ft.
Area of tail plane	..	..	..	..	7½ sq. ft.
Area of elevators	..	..	..	..	5½ sq. ft.
Area of fin	..	..	..	..	3 sq. ft.
Area of rudder	..	..	..	..	3 sq. ft.
Weight of machine, empty	..	..	..	..	370 lbs.
Weight, fully loaded	..	..	..	..	600 lbs.
Weight, per sq. ft.	..	..	..	..	5½ lbs.
Weight, per h.p.	..	..	..	..	17 lbs.
Speed range	..	..	..	..	35-90 m.p.h.
Cruising speed	..	..	..	..	75 m.p.h.
Climb to 800 ft.	..	..	..	..	1 min.

## A Zeppelin Subscription

THE 26th anniversary of the first ascent by a Zeppelin airship, which falls on August 20, is to be made the occasion for an appeal for public subscription to assist in the building of a new Zeppelin. Dr. Eckner, with the full approval of the German Government and certain influential corporations, is asking for about £200,000, and it is proposed to ask the Allies for permission to build a Zeppelin of 105,000 cub. m. capacity for use in connection with Polar exploration. If this

permission be not granted, a smaller airship, of not more than 32,000 cub. m., will be built.

## Maharajah of Jodhpur over London

ON July 31 the Maharajah of Jodhpur, accompanied by some of his polo team and suite, and Sir Sefton Brancker—14 in all—made a flight over London from Stag Lane in the D.H.54. Capt. Geoffrey de Havilland and Capt. H. S. Broad were in charge of the machine.

## APPRENTICESHIPS IN THE ROYAL AIR FORCE

THE Air Ministry announces that 700 aircraft apprentices, between the ages of 15 and 16½, are required by the Royal Air Force for entry to the Aircraft Apprentice School at Halton, Bucks, in January next. These apprentices, who must be well educated and physically fit, will be engaged as the result of two examinations, one an *open* competition conducted by the Civil Service Commissioners, and the other by a *limited* competition carried out by the Air Ministry in conjunction with the local education authorities throughout the country. Boys accepted for employment will be attested as airmen and will engage to complete a period of 12 years' service on the active list of the Royal Air Force, the period commencing to run from the date of their attaining 18 years. On completion of their active list service they will be discharged to civil life or may be allowed to re-engage to complete 24 years' service for pension. Normally their duties are carried out on the ground in the technical workshops of the Air Force.

The aircraft apprentice scheme was inaugurated in 1920, with a view to the Royal Air Force training boys of good education for service as skilled craftsmen in its own well-equipped technical schools. Since then approximately 2,000 boys have completed their training and are now at work in service squadrons both at home and abroad, contributing substantially to the efficiency and reliability of the ground organisation of the Air Force. So successful has the scheme been that approximately 3,000 boys are now regularly undergoing training, a tribute to the popularity of this new opening for boys.

Application to sit in the *open* competition must be made to the Secretary, Civil Service Commission, Burlington Gardens, W.1, not later than September 3. Applications on behalf of the sons of officers and senior N.C.O.'s of the three services to be nominated to sit at this examination must be submitted to the Secretary, Air Ministry, London, not later than August 21. Candidates for the *limited* examination should make application, if they are still at school, to their headmasters with a view to securing a nomination from the education authority responsible for the school. If they have left school application should be made to the Advisory Committee for Juvenile Employment in their area, while boy scouts can also apply to the authorities of the Boy Scout Association and territorial cadets to the officer commanding their units. There is no fee for this examination, which is carried out at schools in each area where boys are nominated. Applications to attend this competition must be received by the Air Ministry from the education authorities or other nominating bodies by October 6. Candidates should therefore apply to their headmaster for the necessary nomination well before that date. The syllabus for both examinations consists of

mathematics, experimental science, English and a general paper, and has been designed to be suitable for boys still at school and following a normal course of instruction.

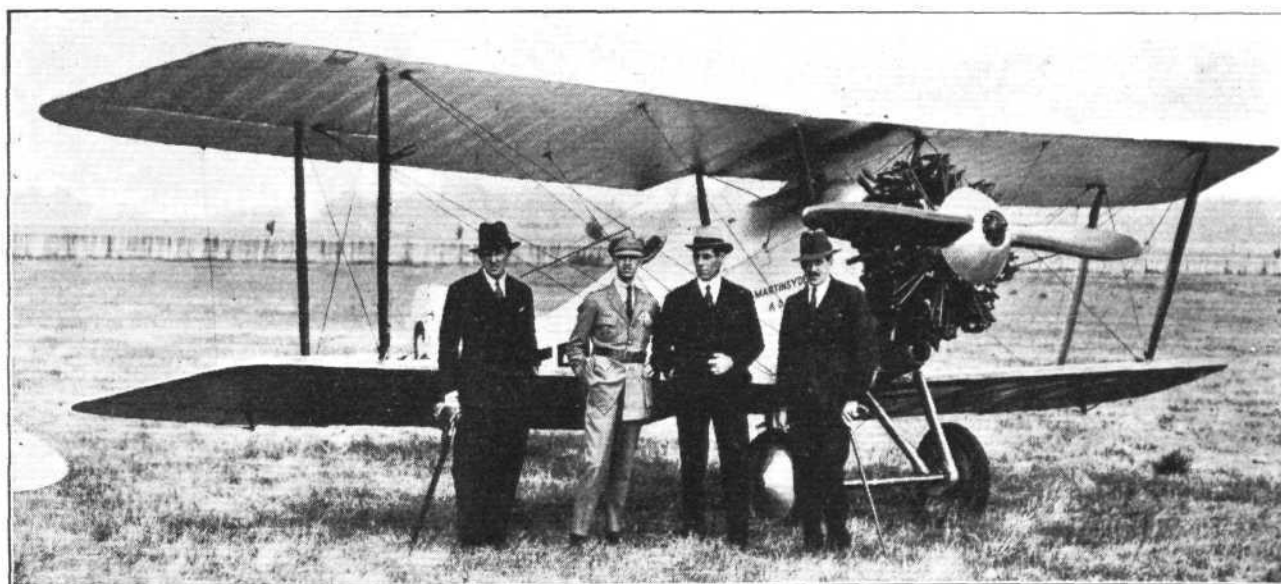
When appointed as aircraft apprentices boys are given three years' training by technical instructors in a skilled trade and general education by civilian schoolmasters up to the standard of a good technical school. After they pass from the apprentice training school, special educational facilities are afforded them to continue both their technical and general education, so that when they eventually leave the service they are well equipped to follow a trade in civil life.

The principal trades open to boys, who are invited in advance to indicate their preference, are carpenter-rigger, aero engine fitter and wireless operator mechanic. In assigning boys to these trades every endeavour is made to give effect to each boy's individual preference, the wishes of the boys in this respect being considered in the order of their position on the examination list. During the period of training there is careful supervision of health and general welfare, medical attendance, religious instruction from the chaplains of several denominations, and recreation facilities. The housing conditions and food are good. Six weeks' annual leave is granted.

Pay is given, under existing regulations, at 1s. 6d. a day until the age of 18, and then at 3s. a day until the course is completed, which enables the apprentice to be self-supporting from the time he leaves home. At the end of the course the aircraft apprentice sits a passing-out examination for promotion to the rank of leading aircraftman, with pay varying from 5s. 2d. to 5s. 6d. per day. Those boys who do not qualify for the highest grade will be appointed as aircraftmen with slightly lower commencing rates of pay. The present rates of pay of apprentices and airmen may be subject to revision in the immediate future.

A small number of the leading apprentices are sent, on completion of their course, to the Royal Air Force Cadet College for training as commissioned officers. Others are given an advanced course and are eventually appointed N.C.O.s. with the rank of corporal. There is also a reasonable chance of selection from volunteers for a further number to qualify later in flying to become airmen pilots, with the rank of sergeant.

Headmasters, parents and others interested in the scheme can obtain copies of the regulations for entry (A.P. 134) on application to the Secretary (M.1), Air Ministry, Kingsway, W.C.2, together with an illustrated pamphlet describing the life of an apprentice, and lists of the Education Authorities having the power to nominate boys for the Air Ministry *Limited Competition* for Aircraft Apprentices.



**INTERESTING VISITORS AT WADDON:** On July 20 distinguished visitors from foreign parts inspected the Martinsyde-Jaguar ADC.1 machine at the Aircraft Disposal Company's works at Waddon. The group shown above, standing in front of the ADC.1 are, from left to right: Maj. J. Stewart (A.D.C., Ltd., Sales Manager); Maj. Sarmento de Beires of the Portuguese Military Aviation Service, who flew from Lisbon to Macao last year; Comdr. R. Fitz-Simon, of the Argentine Naval Air Service; and Capt. Walker (A.D.C., Ltd., Works Manager).

# NEW BRISTOL TYPE TESTS

## Improved "Lucifer" Develops 120 B.H.P.

SINCE the first Bristol "Lucifer" engine was produced, work on improvements has been steadily going on, and the engine has now reached a degree of perfection which would be extremely difficult to beat. Quite recently the latest type of "Lucifer," known as the series IV, has passed the Air Ministry's 100 hours' type test with flying colours, with the result that the rated b.h.p. at a normal speed of 1,700 r.p.m. has been increased to 120.

The improvements incorporated in the series IV "Lucifer" have been based on practical experience obtained with the previous model during two years of service in the Bristol Flying School. That the older engine has been giving extremely good results will be gathered when it is stated that during the two years in which this type of engine has been used by the school there has not been a single forced landing due to engine trouble. Considering the very trying conditions obtaining in school work, this is a record of which the Bristol aeroplane Company may well be proud, and bears convincing testimony to the reliability of the "Lucifer." The fact that this engine has only three cylinders results in greater simplicity and ease of maintenance, since there are very few parts requiring inspection or overhaul.

Before the series IV "Lucifer" was put up for the recent Air Ministry tests, each modification was tried out in the air for a considerable flying period, so that by the time the engine commenced its strenuous tests it was by no means an untried proposition, and barring unforeseen mishaps there was every possibility that the engine would have no difficulty in passing the tests. This was, in fact, the case, as the following particulars will indicate.

The tests, which comprised in all 105 hours 10 minutes running, included:—

1½ hrs.	on Froude Dynamometer	..	1st power curve.
40 "	"	"	.. 108.2 b.h.p. (90 per cent.) at 1,700 r.p.m.
50 "	hangar	..	.. 108.2 b.h.p. (90 per cent.) at 1,700 r.p.m.
9 "	Froude Dynamometer	..	.. 108.2 b.h.p. (90 per cent.) at 1,700 r.p.m.
1 hr.	on	"	.. 120 b.h.p. at 1,700 r.p.m.
1 "	"	"	.. high speed at 1,960 r.p.m.
10 mins.	"	"	.. slow running at 400 r.p.m.
1 hr.	"	"	.. high power 143.2 b.h.p. at 1,870 r.p.m.
1½ "	"	"	.. 2nd power curve.

The readings taken during the 100-hour test at 1,700 r.p.m. were:—

Run.	Hours non-stop.	Power at end.	Consumptions.			
			Fuel Gals.		Oil Pints.	
			Gals./Hour.	Pts./B.H.P./Hr.	Pts./Hour.	Pts./B.H.P./Hr.
1	3 & 7*	123.9*	7.89	.582	2.75	.025
2	10	123	7.89	.582	2.75	.025
3	10	123	8.0	.591	4.6	.042
4	10	123	8.0	.591	3.6	.033
5	10	Hangar	8.12	.598	2.6	.024
6	10	"	8.0	.591	4.6	.042
7	10	"	8.02	.592	6.1	.056
8	10	"	7.89	.582	5.1	.047
9	10	"	8.02	.592	4.4	.040
10	10†	131.9	7.88	.581	4.4	.040

\* Test stand Breakdown.

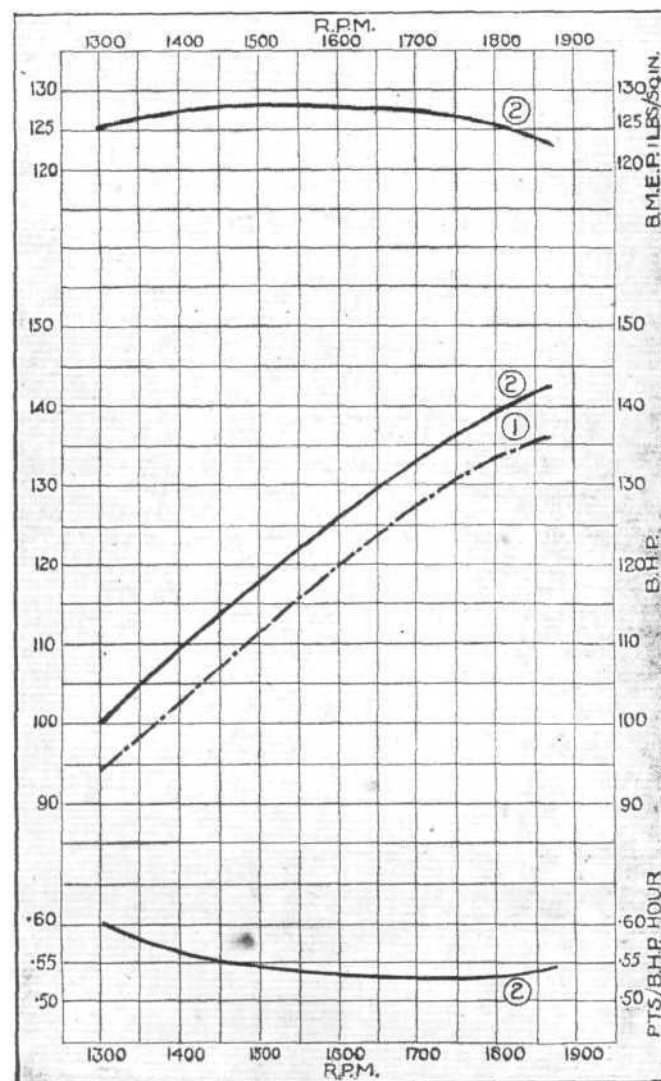
† Last hour full throttle.

Throughout the tests the performances of the engine steadily improved, as will be seen from the accompanying power curves taken before and immediately after the 100 hours' running. It will be seen that before the 100 hours' running the engine developed 127 b.h.p. at 1,700 r.p.m., with a consumption of 0.574 pts./b.h.p./hr.; while at 1,870

r.p.m. the power was 136 b.h.p., with a consumption of 0.555 pts./h.p./hr. At the end of the 100 hours' test the engine developed 132.5 b.h.p. at 1,700 r.p.m. and the consumption was 0.535 pts./h.p./hr. At 1,870 r.p.m. the power had increased to 142.3 b.h.p. and the consumption was only 0.540 pts./h.p./hr.

Throughout the period of the 100 hours the average consumption was 7.98 gallons per hour, or 0.590 pts./b.h.p./hr., while the oil consumption averaged 4.1 pts./hr., or 0.038 pts./b.h.p./hr.

After the conclusion of the tests the engine, which had then been running for 105 hours under type test conditions, was stripped for inspection by the representatives of the



**NEW BRISTOL "LUCIFER" TYPE TESTS:** Curve 1 shows the power before the 100 hours type tests, while curves 2 show power, brake mean effective pressure, and consumption after the 100 hours type tests.

A.I.D. and was found to be in excellent condition, the actual wear on the major components being infinitesimal.

How important are the improvements represented by the series IV "Lucifer" will be realised when it is pointed out that the power at normal speed has been increased from 100 h.p. to 120 h.p., while the reliability is at least as good as that of the earlier model. The power-weight ratio has also been improved upon, being 2.75 lbs./h.p. in the series IV, as compared with the 3.25 lbs. in the series III.

In view of its great simplicity, and its definitely established reliability, the Bristol "Lucifer" IV should be exceptionally useful in school machines. The engine is now provided as standard, with hand turning gear and complete exhaust system.

# R.A.C. 1925 AUGUST MEETING AT LYMPNE

*Lympne, Friday, July 31.*—Rain and low clouds had reduced visibility to a few hundred yards when we arrived at the Lympne aerodrome this morning. The hangars, however, revealed considerable activity, although the perfectly impossible weather had prevented many competitors who had intended to fly their machines across from doing so. A tour of the sheds at 11.15 showed the following machines to be present, and more or less ready: The A.N.E.C., the Hawker "Cygnets," the Pixies II and III, the Bristol "Brownie," the Beardmore "Wee Bee I," the Cranwell C.L.A.3, and the Avro-Lynx.

Minor adjustments were being made and finishing touches given here and there, but generally speaking everybody seemed to be a good deal nearer being ready than is usually the case. The Cranwell, as the only new machine entered, naturally came in for a close inspection, and the more one saw of it the greater became one's respect for the members of the Cranwell Light Aeroplane Club. The machine looked "right," much more so than illustrations would indicate, and a short conversation with Flight-Lieut. N. Comper, the designer and pilot of the C.L.A.3, confirmed one's own impressions of it. The designer pointed out that there were a number of small refinements which he would have liked to incorporate, but for which there had been no time, such as filling the gap between fin and tail plane, and fairing various points, strut attachments, etc. He had flown the machine for a very short time only at Cranwell, but the machine seemed to be well balanced and to handle well. At the time of our visit the gaps between ailerons and rear wing spars were being covered with rubber strip, and the same material was being wrapped around the axle and undercarriage cross-tubes. In our descriptive article last week it was stated that it was hoped to obtain for the C.L.A.3 an "aerobatics" airworthiness certificate, but it seems that tubes of the right specification could not be obtained, and that, therefore, at the moment the machine has only a "general" C. of A. However, later on when wing struts of the right steel have been fitted, the machine will presumably be officially sanctioned for stunt flying. The workmanship and finish are a credit to all concerned, and the C.L.A.3 looks as if it would be very fast. It seems, however, a little doubtful whether a top speed of 100 m.p.h. will be attained until the machine has been further "cleaned up."

The A.N.E.C. turns out to be the 1923 single-seater with the wing span cut down to a minimum. A larger petrol gravity tank of brass has been mounted on top of the wing. This tank was, we are informed, built on to the machine in France, when it took part in the *tour de France* for "Avionettes." Mr. "Jimmy" James tells us of troubles with propellers, it having been found impossible yet to get one which exactly suits the machine and engine. The latter, by the way, is a British Anzani of the same type as that

fitted to the A.N.E.C. two-seater and Hawker "Cygnets" in last year's Lympne competitions. Very important improvements have, however, been effected, such as a different crankshaft, better valve material, different valve springs, plugs in front, etc., and the British Anzani of 1925 is altogether a better proposition than was the original type.

The Hawker "Cygnets" is another machine fitted with the British Anzani, mounted "upside down" as in the A.N.E.C., and covered by a very neat cowl. The "Cygnets" itself does not appear to have undergone any changes, and is as pretty as ever; probably it will be held by most to be the prettiest of the light planes. The Hawker-Sopwith organization appears to have been very good, as might be expected from Mr. Jones, and the machine looks ready to start at once.

Incidentally it is of interest to note that the "Cygnets," which is of extremely low structure weight, appears to have worn well, its fuselage being, as far as one can see, as good as the day it first left the works. When the machine first appeared there were those who thought that, although the machine might be, and probably was, strong enough for all ordinary flying stresses, it would quickly be

damaged in handling on the ground. This contention does not seem to be borne out in practice.

The Bristol "Brownie" entered for the present races is the all-metal machine (i.e., the identical one which flew in last year's Grosvenor Cup Race) and has been flown a lot by Mr. Uwins in the course of Bristol "Cherub" development work. The machine itself appears unchanged, but the new Bristol "Cherub" has, we believe, been somewhat altered. An innovation which is revealed by external inspection is the fitting of two sparking plugs in series to each cylinder, so that, although actual dual ignition is not provided, there should be small likelihood of ignition trouble.



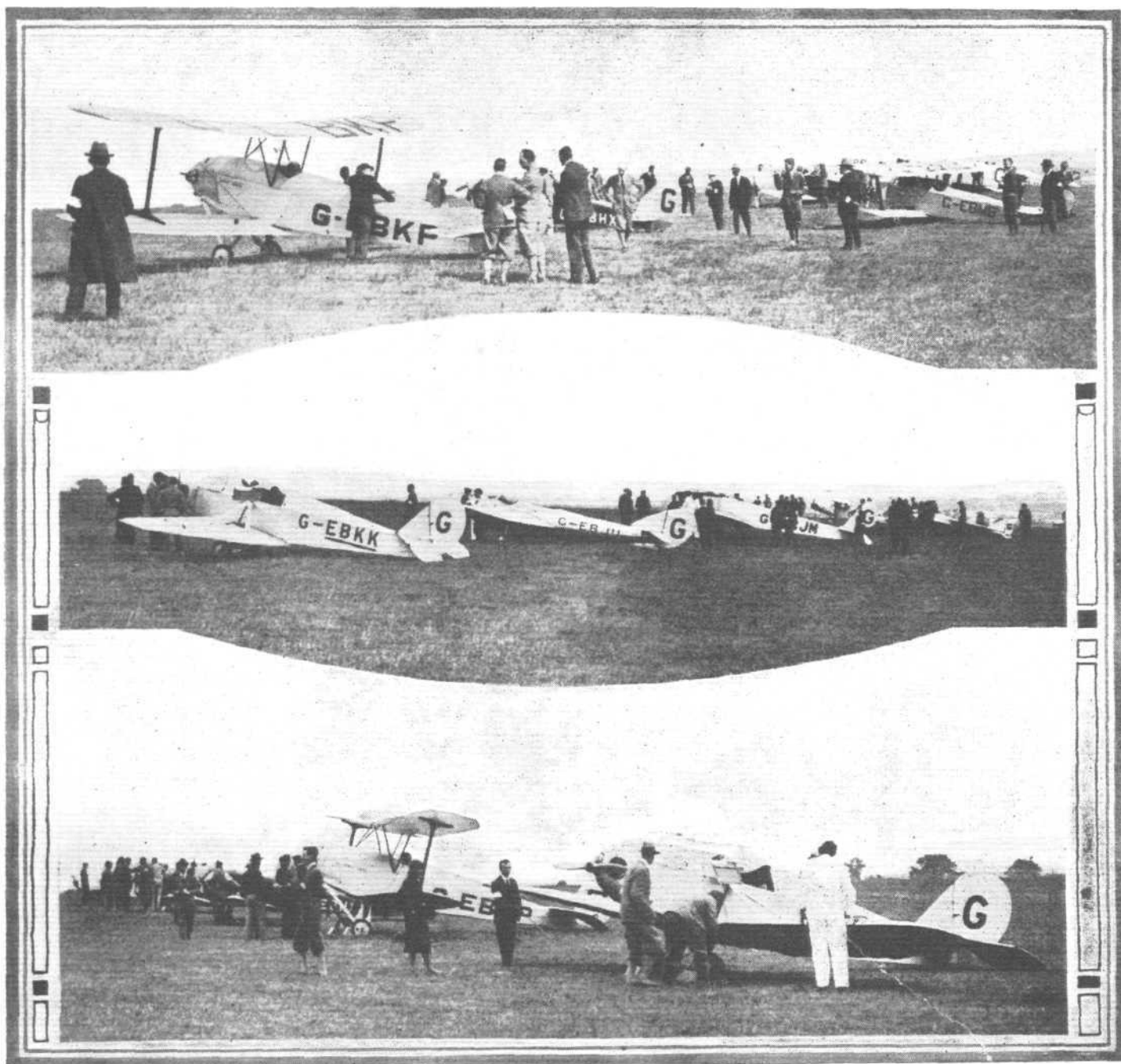
OFFICIALS AT LYMPNE: Col. F. McClean and Lord Edward Grosvenor.

The two Parnall "Pixies" look unchanged since last year, but the "Pixie II" has been fitted with a Blackburne 1,000 c.c. engine, and the "Pixie III" with a geared Bristol "Cherub." In this connection it is of interest to mention that this is the only geared "Cherub" in the meeting. Both machines are ready, and no work is being done on them.

The Beardmore "Wee Bee I," winner of first prize in last year's competition, is another light 'plane ready for the fray. Of changes one can detect but few. The leading edge "door" giving access to the front cockpit is now made of aluminium sheet instead of three-ply, but of really important alterations there is no sign. The machine looks as "fit" as it did in its

ently, just a possibility that permission may be obtained to fly it across to Lympne, and in that case the alterations might be carried out "on the spot."

Shortly after mid-day there is a fresh arrival in the form of the de Havilland 53 "Oiseau-Mouche." In view of the not inconsiderable distances to be covered, this machine has been fitted with an auxiliary tank in the form of a 2-gallon petrol tin mounted on the floor of the pilot's cockpit and equipped with pressure gauge, hand pump, etc. The engine fitted is a Blackburne "Badger," mounted "upside down" in the fashion first introduced by Mr. W. S. Shackleton in the original A.N.E.C. monoplane.



**LINING UP FOR THE LIGHT 'PLANE HOLIDAY HANDICAP:** Above, the machines getting ready for the first heat. In the centre, the line-up for the second heat, and below, the line-up for the final.

first lap at Lympne last year. The Bristol "Cherub" fitted is the latest type, with dual plugs, etc.

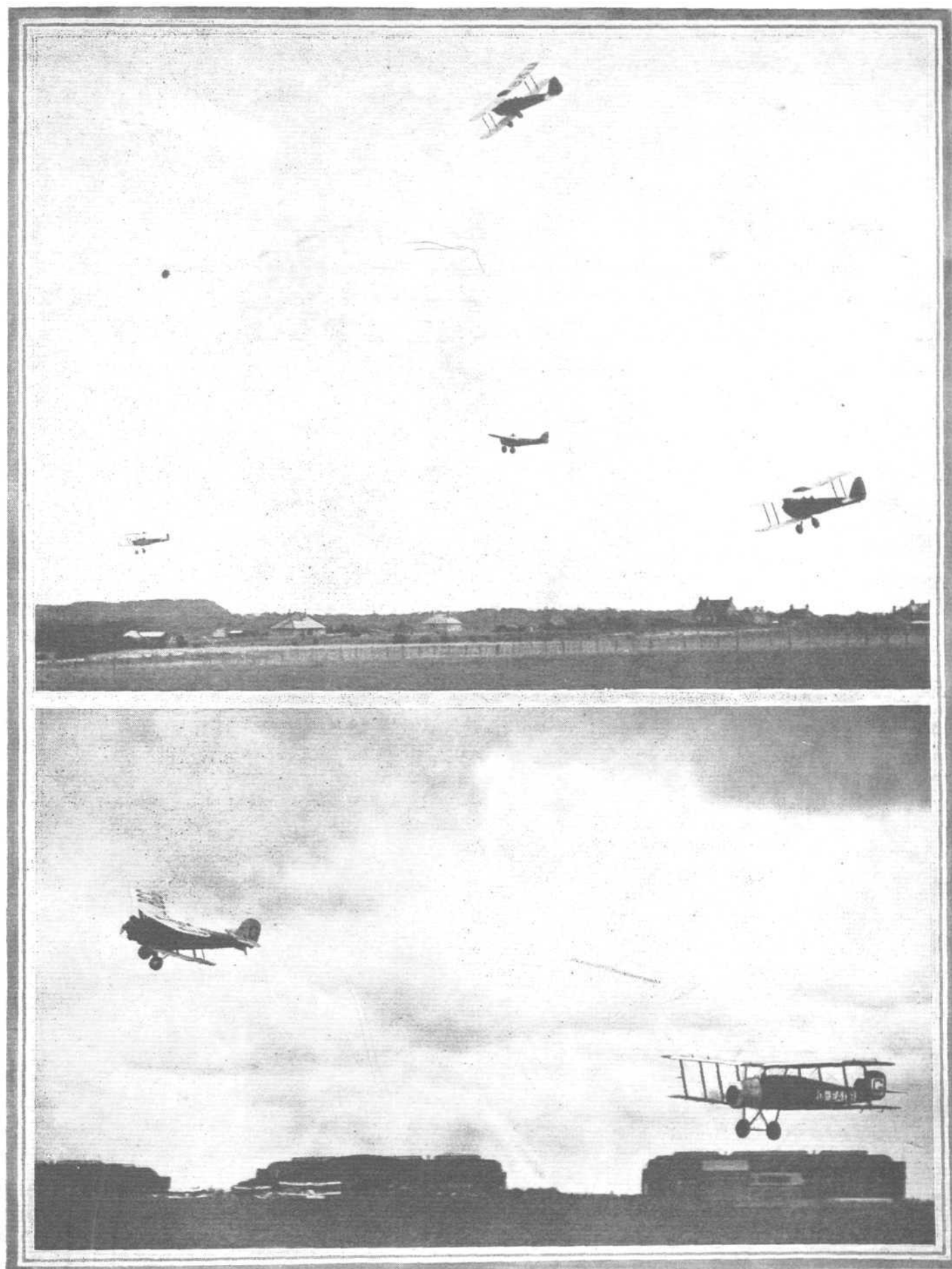
Of the larger machines the Avro "Lynx" was the only one to have arrived by mid-day, but as there are no races for this class of machine until Monday, there is plenty of time for the rest to arrive during the afternoon. One gathers that it is doubtful whether the B.E.2e will take part after all, as the Air Ministry have, at the last moment, refused to grant it a certificate of airworthiness until certain modifications have been carried out, notably in connection with the bracing of the top plane extensions. As these modifications will necessarily take some time to effect, it is somewhat doubtful whether this old-timer will be a starter. This is a pity, as doubtless many would like to see it again. There is, appar-

During the early afternoon it is reported that the little Pander monoplane is down at Ostend, the weather being so bad that flying is impossible. Col. The Master of Sempill informs us that he has never yet flown the machine, and that he, therefore, is anxious that the machine should arrive in time for him to get a chance to test it before tomorrow's race. Mr. H. Pander himself arrives about half-past two, and takes a very keen interest in the British machines.

Round about tea-time the weather improves somewhat, and Sq.-Ldr. Haig has the "Pixie III" brought out. The machine appears to climb very well, and after flying around for some little time Haig makes a perfect loop very low down.

Uwins comes out next on the Bristol "Brownie" for a short test flight and the machine seems to handle extremely

## AIR RACING AT LYMPNE



HEADING FOR POSTLING : Above, in the lead is the Airdisco "Avro," followed by the Pander monoplane, above which is seen the De Havilland "Moth" flown by Broad, with Cobham on the second "Moth" in hot pursuit. Below : The Bristol "Bloodhound," and the Sopwith "Gnu," approaching the aerodrome turning point.



**SOME OF THE LARGER MACHINES AT LYMPNE ;** From left to right, the Avro-Lynx, Bristol "Lucifer," Bristol "Bloodhound," S.E.5, Sopwith "Gnu," A.D.C.1, and a sky-writing S.E.5.

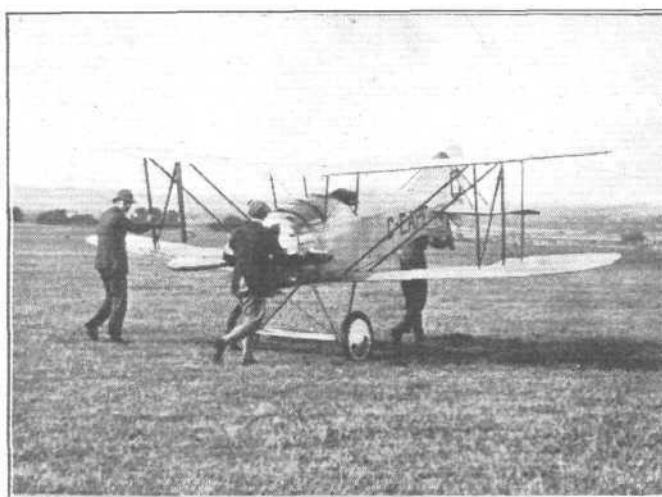
well and to fly very strongly. Some vertically banked turns are surprisingly steady and without "flicker." The fact that the "Brownie," although in every sense a light 'plane, is not a particularly small machine, probably accounts for its smooth movement.

The next machine to come out for an airing is the "Wee Bee," piloted by Mr. Kingwill, who handles the monoplane exceptionally well. Some steeply-banked turns close to the ground indicate perfect judgment. In the meantime "Jimmie" James has come out on the A.N.E.C. The machine is fast, but one receives the impression that the wing surface has been reduced too much, and that the machine would probably be just as fast, and would certainly get off better, with slightly more area. An unsuitable propeller is still keeping the engine revolutions down and preventing the Anzani from developing its full power.

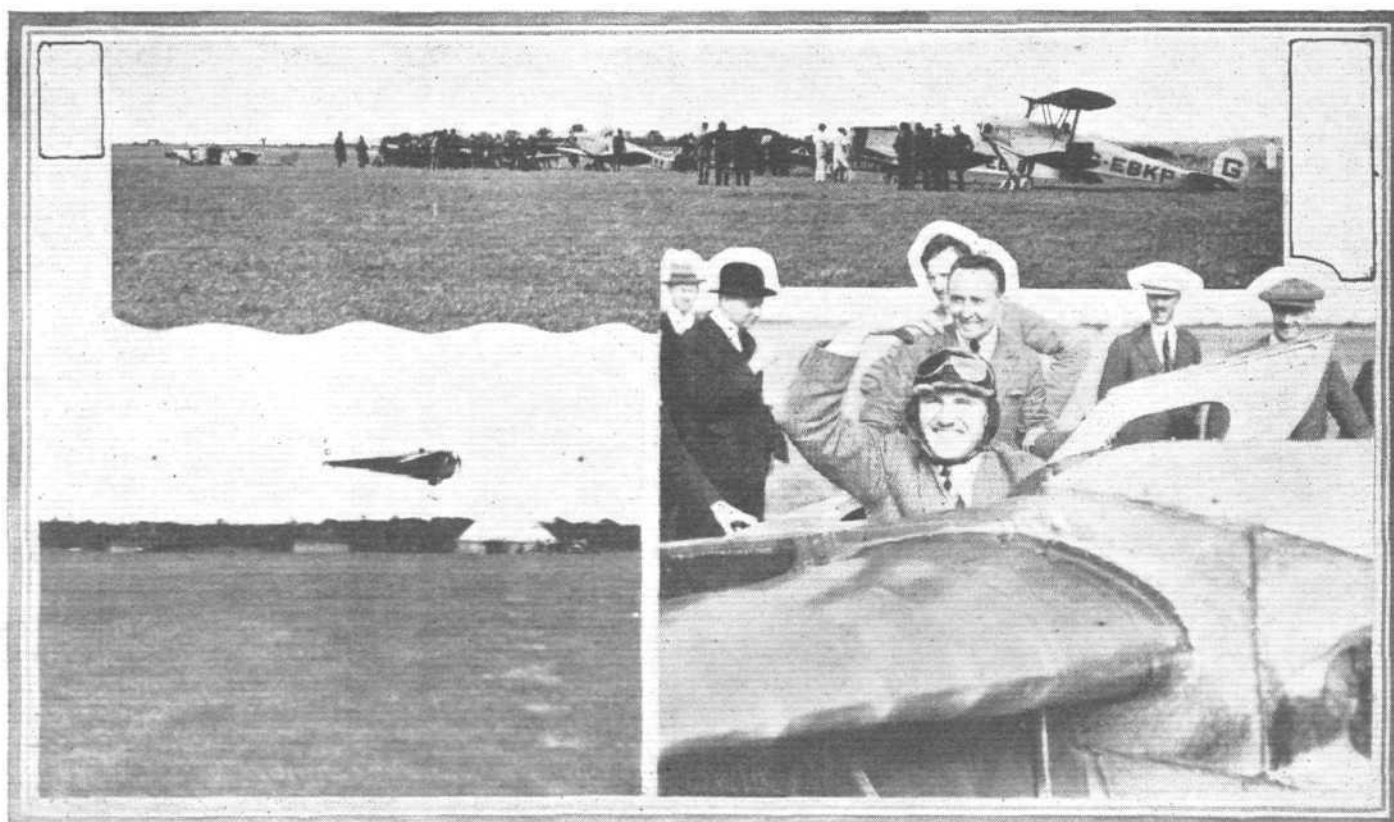
When Comper brings out the Cranwell monoplane for its first flight in public, there is great excitement, and work in the sheds is momentarily suspended. The machine is certainly fast, and gets off very well, considering its small wing area (70 sq. ft.). As it flies overhead, it is seen that the aileron gaps are not closed, and it is afterwards learned that the rubber strips were found to cause the controls to work too stiffly and were, therefore, removed.

The Short "Satellite," which arrived earlier in the afternoon, has been erected and is taken for a trial flight by Mr. Lankester Parker. The machine seems to fly much more strongly than it did last year. A second D.H.53, this one fitted with an A.B.C. "Scorpion" engine, also arrives (by road).

By dark to-night the Sopwith "Gnu" had arrived by air,

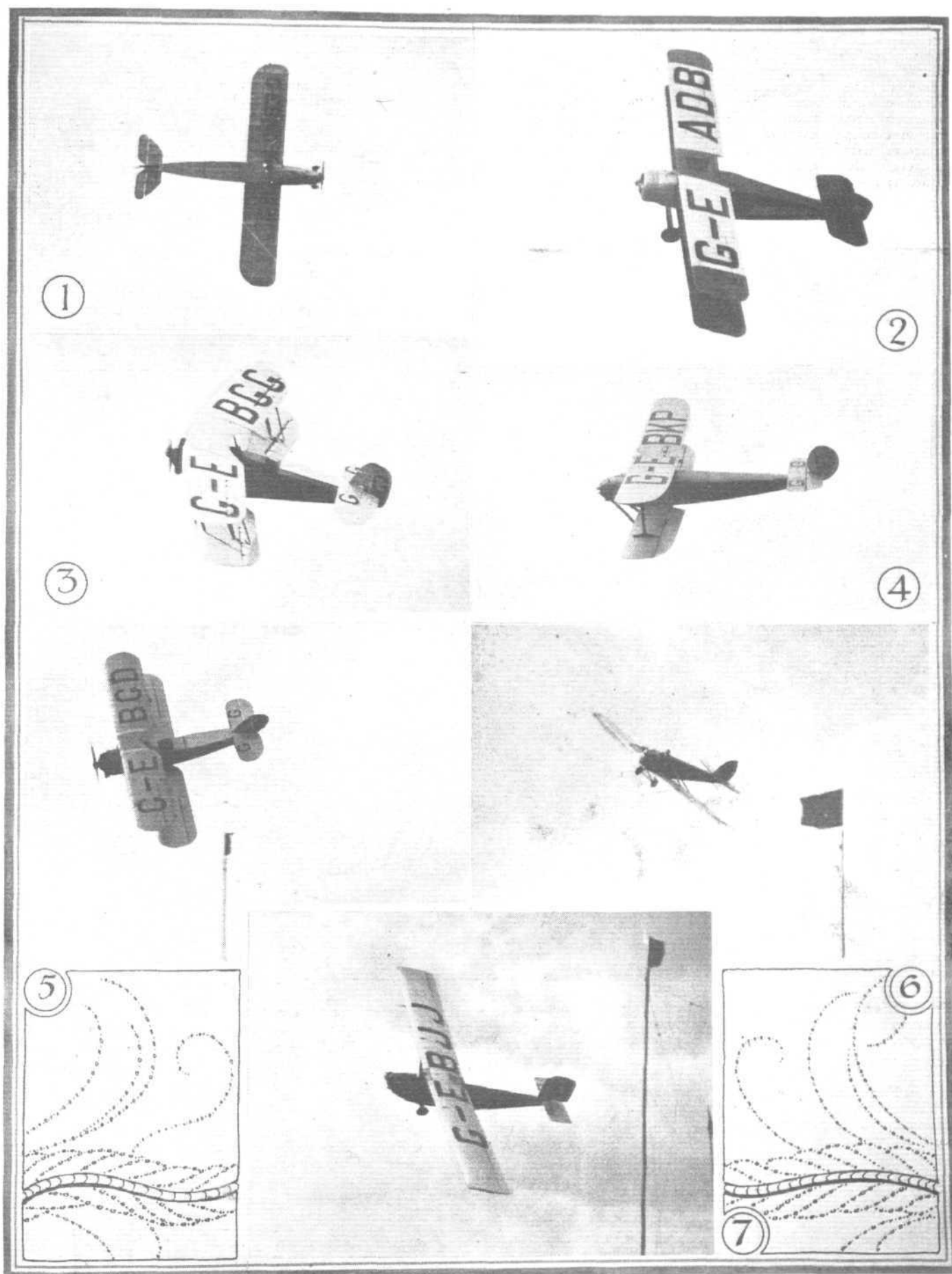


**The Austin "Whippet" going out for the Private Owners' Handicap.**



**GROSVENOR CHALLENGE CUP RACE :** Above, the line-up of the machines. Below (left), Chick, on the "Hurricane," winning the race ; and (right), Chick acknowledging the applause of the public.

# AIR RACING AT LYMPNE



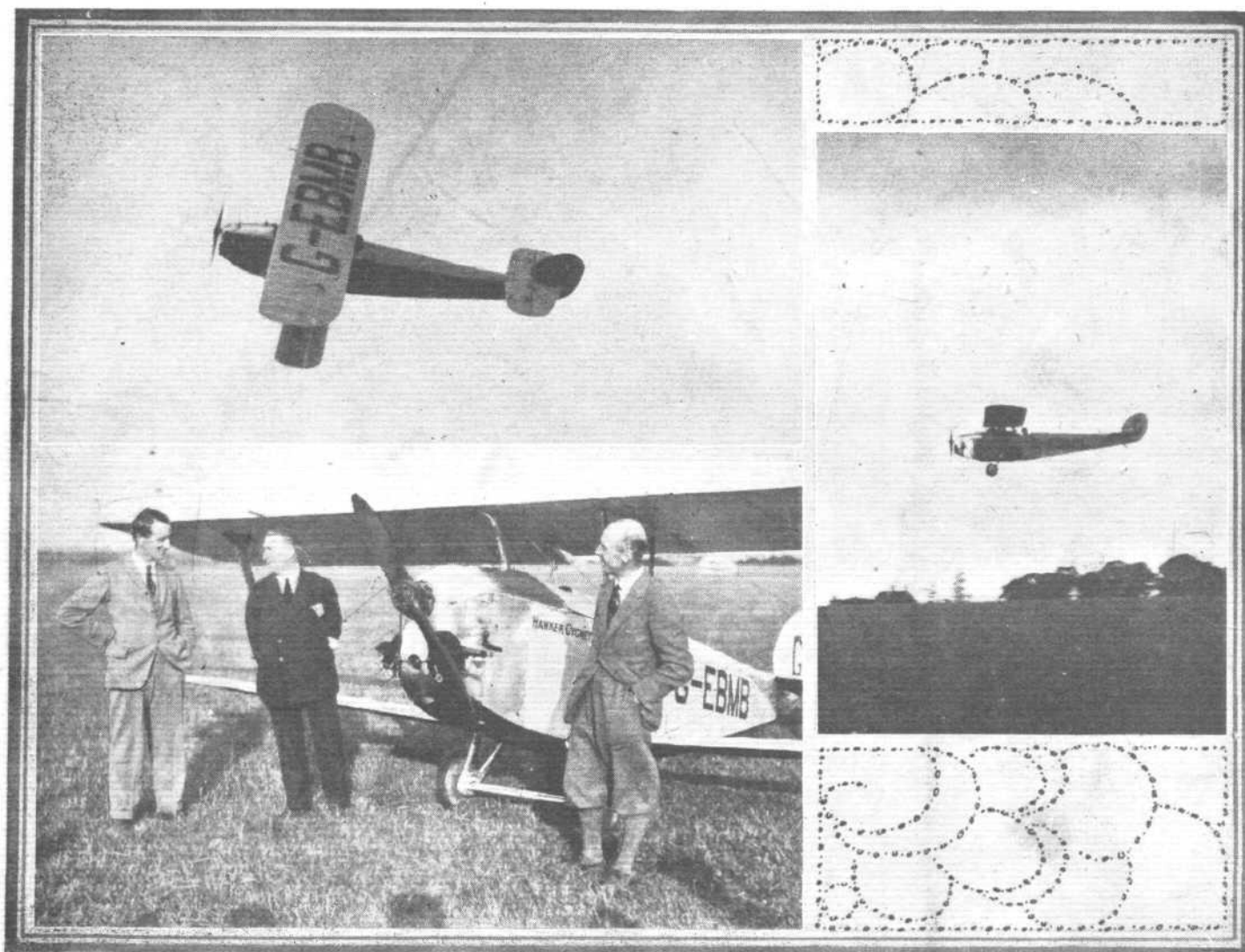
**CORNERING :** Various styles of cornering were seen at Lympne, nearly all of them good. The above photographs show some of the machines doing turns. 1, Comper making a vertical bank on the Cranwell C.L.A.3. 2, King on the Sopwith "Gnu." 3, Campbell on the Bristol "Bloodhound." 4, Hinkler on the Avro "Avis." 5, Holmes on the Bristol "Lucifer." 6, Boyes on the D.H.53, and 7, Kingwill on the Beardmore "Wee Bee."

as had also the Pander monoplane (piloted by Raparlier) from Holland and the Avro "Avis" from Southampton. The latter, piloted by Hinkler, had run out of petrol when within about one mile of the aerodrome, and a landing had to be made on the Marshes. Ultimately, a supply of petrol was secured, and the "Avis" safely reached its destination. Two Bristol machines, the "Bloodhound" and the "Lucifer," school machine, arrived from Filton, and the Sopwith "Scooter" from Hendon, all by air.

*Lympne, Saturday, August 1.*—The weather, although far from being perfect early this morning, was a good deal better than yesterday's, and the races of the day were not so greatly interfered with as many had expected, although in some of the events competitors had a pretty bad time of it. Fortunately the rain came in showers, most of fairly short duration, and so the programme that had been planned could be carried through without a hitch.

Out of the seven machines entered for this heat, there was but one non-starter, Flight-Lieut. Soden on his Austin "Whippet," who had not arrived at Lympne. The remaining six faced the starter and all got away on the drop of the flag.

The first man away was Bert Hinkler, on the Avro "Avis," who got off the ground very quickly, and was away on his course with a steeply-banked turn close to the ground. Wing-Commander W. Sholto-Douglas, who was next, on the D.H.53, G-EBHX, took a much longer run, and was out by the trees, along by the south side of the aerodrome before he turned. Flight-Lieut. Bulman on the Hawker "Cygnet," headed right across the aerodrome and turned right by the sheds instead of making a left-hand turn around the tent. This disqualified him, but Bulman was unaware of the fact, and went on his way undismayed. Flying-Officer Boyes got away rather better on his D.H.53 (G-EBHZ) than had Douglas, while Captain Kingwill swung the "Wee Bee" round the tent



**THE INTERNATIONAL HANDICAP :** This event was won on the Hawker "Cygnet," which is seen on the right crossing the finishing line, and on the left doing a turn round the tent. Below, contented "Hawkers!" Left to right, Mr. Sidney Camm, designer of the "Cygnet," Mr. Jones, of the Hawker Co., and Flight-Lieut. Bulman, pilot of the "Cygnet."

**The Light Aeroplane Holiday Handicap.**

The first event of the Lympne meeting was an International Handicap for light 'planes whose engine weight did not exceed 170 lb. As this event had brought a very considerable number of entries, it was decided to fly it in two heats and a final. The entries in the first heat, and their handicap allowances, were as follows:—

Pilot.	Machine and Engine.	Handicap.	
		m.	s.
Hinkler ..	Avro "Avis," Bristol "Cherub"	13	12
Douglas ..	D.H.53, Blackburne "Badger"	12	33
Bulman ..	Hawker "Cygnet," British Anzani	9	51
Boyes ..	D.H.53, A.B.C. "Scorpion"	7	28
Kingwill ..	Beardmore "Wee Bee," "Cherub"	7	20
Soden ..	Austin "Whippet," 45 Anzani	2	5
James ..	A.N.E.C., British Anzani	Scratch.	

in a very steep left-hand turn close to the ground. James, on the clip-winged A.N.E.C., took a very long run to get off, and lost a lot of valuable time before he finally got on his course. One receives the impression that this machine is either under-powered or under-surfaced as it stands, but is seems likely that if "Jimmy" could find those extra revs., by getting a suitable propeller, the machine would handle quite differently.

At the end of the first lap the machines came along in the order of starting, but of Bulman there was no sign, the machines that had started after him rounding the aerodrome turning point and starting on their second lap. Coming around the tent at the finish of the second lap, Hinkler and Douglas were almost neck and neck, followed by James (finishing his first lap) and later by Boyes and Kingwill, the latter flying low and making extremely pretty turns. Then came Bulman, who had not been round before, and whose first lap it therefore was. It was learned later that

he had landed with plug trouble, but had put matters right and had started again. As he was disqualified for a wrong start, it was rather a pity there was no way of letting him know that he might as well give up. By the end of the third lap Douglas had gained the lead, with Hinkler some distance behind, James arriving in between on his second lap, and Boyes and Kingwill in their original places. It was fairly evident that, barring accidents, Douglas would secure first place, but it seemed to be a toss-up whether Hinkler or Boyes would be second.

At the finish Douglas came in as first, well in the lead, and by diving under Hinkler, Boyes gained second place, Hinkler being third. The rest of the machines, including the "Cygnets," completed the race. Thus the Royal Aero Club's special prize of £25 went to Douglas in this heat.

The second heat started at 12.15, and during the start the wind freshened considerably. This heat also had drawn seven entries, and it further followed the example of the first heat in that one of the seven was a non-starter. This was Col. The Master of Sempill, who had taken the Pander monoplane for a flight along the course in the morning, and who had forced landed in a field, an oil pipe having broken. The Pander was brought back by road, but it was found necessary to replace a cylinder, as well as replace the fractured

"Brownie," made an excellent start, and lost no time in getting under way to the first turning point, doing a steeply-banked left-hand turn around the tent with the left wing but a couple of feet from the ground. Chick, on the Farnborough "Hurricane," made a good start, as did also Courtney on the "Pixie II," but Comper, on the Cranwell C.L.A.3, made a wide circle over the sheds before finally setting off, it appearing as if he did not quite feel at home in his machine, as might well be the case, considering the short time he had been able to fly it previously.

During the first lap Courtney passed Chick, Haig and Uwins maintaining their relative position. Uwins was flying low, and his turns were a joy to behold. Comper returned, but instead of starting on his second lap he came in and landed. It was ascertained later that his engine had shown signs of overheating. Courtney was going very strong, and in the second lap he passed ahead of Uwins. Chick took his turns rather wide on the "Hurricane," certainly much more so than did Courtney on the "Pixie II." The third time round Courtney flew much lower and made a splendid turn. In the finish Haig crossed the line first, flying rather high, with Courtney second, almost under him, and Chick third, also flying low. Thus, the £25 prize in this heat went to Squadron-Leader Haig.



Prominent Visitors at Lympne:  
Air Commodore Brooke-Popham,  
Col. Moore-Brabazon, Sir Samuel Hoare,  
and Sir Geoffrey Salmond.

oil pipe, and the work could not be finished in time for the second heat. This was naturally a keen disappointment to Mr. Pander, as it also robbed his machine of an opportunity to fly in the final, which was reserved for the machines gaining first, second and third place in the heats.

The entrants in the second heat and their handicap allowances were:—

Pilot	Machine and Engine	Handicap	
		m.	s.
Haig ..	Pixie III, Bristol "Cherub"	13	12
Parker ..	Satellite, Bristol "Cherub"	10	18
Uwins ..	Bristol "Brownie," "Cherub"	9	08
Chick ..	"Hurricane," Bristol "Cherub"	6	13
Sempill ..	Pander, Anzani ..	5	58
Courtney ..	Pixie II, Blackburne ..	5	29
Comper ..	C.L.A.3, Bristol "Cherub" ..	Scratch	

Haig, on the Pixie III, made a good start, although the wind had veered around to west and the machines had to head for the hangars and take-off up hill. Parker, on the Short "Satellite" had difficulty in "unsticking," and was still on the ground when he approached the south-west corner. Seeing that he could not get off, Parker swung around to the north, parallel with the sheds, and took off down hill, finally returning and rounding the tent. Uwins, on the Bristol

The six machines which had qualified for the final of this event were, therefore, the D.H. 53 (G-EBHX), the D.H.53 (G-EBHZ) and the Avro "Avis" from the first heat, and "Pixie III," "Pixie II" and the "Hurricane" from the second heat. The handicaps were not changed for the final, and they need not, therefore, be repeated.

By the time the final was about to start, the weather became threatening, and during the start and later there were some very heavy showers, which rendered the visibility very poor, apart from the damage they did to propellers. There was some little difficulty in getting the engine of the "Pixie III" to start, but finally it was got going just before the flag fell. Hinkler, as usual, made a beautiful start, and the two D.H.53's also got away well, especially G-EBHZ. This machine, incidentally, broke an oil pipe, which was put right actually on the starting line, and fortunately the engine started on the very first swing of the propeller, just as the flag dropped. Both Chick on the "Hurricane" and Courtney on the "Pixie II" went a bit wide at the start, but in view of their relatively high wing loading this was scarcely to be wondered at.

At the end of the first lap the first three machines retained their position, but the "Hurricane" overtook the second D.H.53 (G-EBHZ) just before crossing the line, and "Pixie II" was very close behind. By a splendid bit of cornering

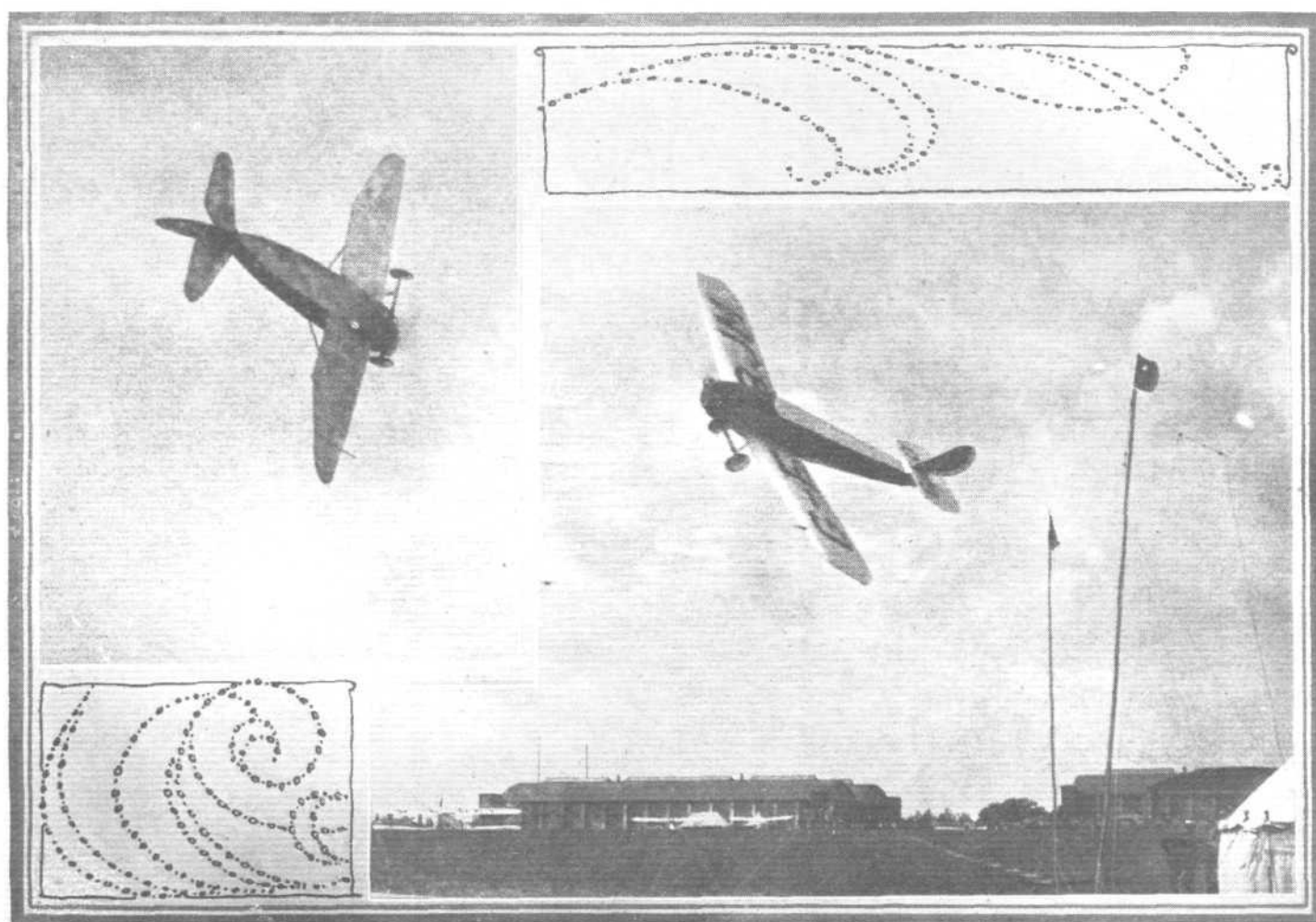
Boyes actually got ahead of the "Hurricane" again. At the end of the second lap Douglas had all but caught up with Hinkler, and Courtney, flying high, and Chick, flying very low, were bunched close together. Of Boyes on the D.H.53 (G-EBHZ), there was no sign, but in the pouring rain it was impossible to see what was happening over towards the ridge. During the third lap the weather got a little better on the aerodrome, but was evidently still very bad to the north-east. "Pixie III" rounded the tent, but shortly afterwards turned as if to land. However, Haig apparently changed his mind, and headed for the Postling turning point again. It was not long, however, before he was seen to descend into a field in the vicinity of Westenhanger station. The others arrived in the following order and commenced the last lap: Douglas, Chick, Hinkler, and Courtney. The last-named, however, returned and landed. With three machines out of the running there was a long interval, and then came the remaining three, Chick finishing first, having overtaken Douglas, who was second, with Hinkler third. First prize of £100 thus went



ON EXHIBITION FLYING: Sir John and Lady Salmond in conversation with Mr. Frank Courtney.

to Chick, while a second prize of £25 was won by Douglas.

Concerning the three who were down, it was learned afterwards that the fabric on the edges of Courtney's propeller had come adrift in the rain, with the result that his engine speed dropped in an alarming fashion. Haig's engine had seized up, owing to a broken oil pipe, and the engine of G-EBHZ blew a cylinder off, owing to a hidden flaw in the crank case casting. Boyes had to make a very hurried forced landing, and in the rain he put his machine down in a field of growing wheat. The 53 stood on its nose, but beyond bending the Fairey-Reid Duralumin propeller no damage was done. As this machine was the property of the "Seven Light Plane Club," of Eastchurch, composed of R.A.F. officers who bought the machine without engine some three months ago, and who had put all their spare cash in the venture, not to mention untold hours of hard work, the mishap was a serious one, but engineers from A.B.C. Motors worked on repairs with a will, and it is hoped to get the machine going again tomorrow.



TWO LOW-WING MONOPLANES: On the left, Courtney making a vertical bank on the "Pixie II," and, on the right, Uwins rounding the mast on the Bristol "Brownie."

It may be of interest to mention that the three competitors to finish in the final took the following times to cover the 50 miles course: The "Hurricane," 38 mins. 22 secs. (corresponding to a speed of 78.2 m.p.h.); the D.H. 53, 44 mins. 52 secs. (67 m.p.h.), and the Avro "Avis" 46 mins. 18 secs. (64.7 m.p.h.).

#### Two-Seater Light 'Plane Scratch Speed Race.

Rain delayed the start of this race until about 3.50 p.m. But two machines took part, the Beardmore "Wee Bee," piloted by Kingwill, and the Hawker "Cygnet," piloted by Bulman. Of the two the "Cygnet" got off more rapidly, but Kingwill cut his turn very short and actually managed to gain the lead. At the end of the first lap Kingwill was well ahead. In the meantime Raparlier came out on the Pander and gave a demonstration of stunt flying. At the end of the second lap Kingwill had still further increased his lead, but in the third Bulman seemed to gain again slightly, while in the last lap he gained very appreciably by flying low along the ridge. It was, however, impossible for Bulman to catch up, and Kingwill won the race easily. It may be of interest to

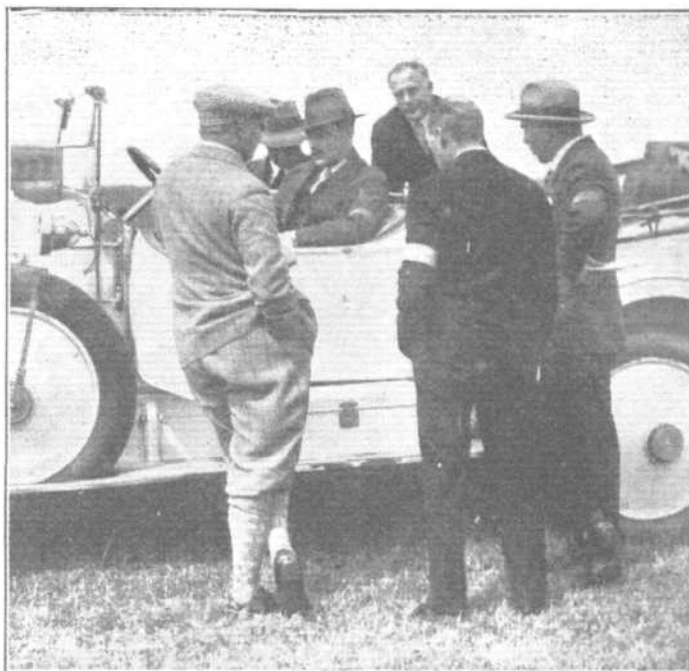


**FOLLOWING IN FATHER'S FOOTSTEPS:** Master De Havilland is almost as keen on flying as is his Dad.

give here the times and speeds of the two machines for the 50 miles. They were, "Wee Bee," 45 mins. 7 secs. (66.5 m.p.h.); "Cygnet" 45 mins. 29 secs. (66 m.p.h.).

#### Single-Seater Light 'Plane Scratch Speed Race.

The last race to be flown on Saturday was a scratch speed race for single-seater light 'planes. Originally quite a number of machines had been entered for this race, but actually only four machines faced Mr. Reynolds and his red flag. The effect of this flag was much the same as that which the red rag is said to have on a bull, with the exception that these four little "bulls" did not, fortunately, attempt to charge Mr. Reynolds. Courtney, on the "Pixie II," made the best start and rounded the tent ahead of the others. The Cranwell C.L.A. 3, piloted by Comper, and the D.H. 53, G-EBHX, piloted by Douglas, rounded the tent together, while "Jimmy" James on the A.N.E.C. lost a lot in starting, owing to the long run required by his machine. At the end of the first lap Comper had gained a slight lead over Courtney, while "Jimmy" was a long way behind, and Douglas came straggling along far behind. It was quite evident that he was no match for the other three, and it was not, therefore, surprising that he abandoned the race. While the remaining three fought it out over the second lap, the D.H. 54 passenger machine with Rolls-Royce "Condor" engine came out with a load of joy-riding passengers. Its get off and climb appeared



**A KNOTTY PROBLEM:** In this group will be recognised Col. Bristow, Col. McClean, Air-Marshall Sir John Salmond, Commander Perrin, Capt. Crouch, and Air-Commodore Halahan.

excellent and when later the machine came in to land everyone was surprised at its very low landing speed. The machine seemed to float along at a ridiculously low speed, and even after making allowances for the deception to which size may give rise, one received the impression that the 54 floated in at about 30 m.p.h. ground speed.

However, to return to the race, which could not be regarded as a particularly exciting one, the order: Comper, Courtney, "Jimmy" was not changed and the three finished in that order, Cranwell winning the first prize of £50.

*Lympne, Sunday, August 2.*—According to the official programme, Sunday was to be devoted to establishing certified performances by light 'planes, the Royal Aero Club's definition of a light 'plane being, for this purpose, one whose engine weight did not exceed 170 lbs. Thus the de Havilland "Moths" could not be accepted for these officially-observed tests, but a considerable number of machines had been entered for the four classes of tests decided upon. These were Class I, Height in a given time of 30 minutes; Class II, Greatest speed over 3 kilometres; Class III, Greatest speed over 50 kilometres, and Class IV, Greatest height (without time limit). In Class I the following machines had been entered: Bristol "Brownie," Beardmore "Wee Bee," Pander monoplane, D.H. 53 (G-EBHZ), Short "Satellite," Hawker "Cygnet," Parnall "Pixie III," and Cranwell C.L.A.3. In Class II the following entries were down, "Brownie," "Wee Bee," Pander, "Satellite," Austin "Whippet," "Pixie II," "Pixie III," A.N.E.C. and Cranwell, and the same machines had been entered for Class III. For class IV a somewhat smaller entries list showed the following: "Brownie," "Wee Bee," Pander, "Satellite," "Cygnet," and "Pixie III." Out of the machines entered, however, but a small proportion actually made an attempt to establish certified performances,



**THE ACTOR AIRMAN AND THE AIRMAN ACTOR:** Mr. Robert Loraine goes for a flight with Alan J. Cobham, in a D.H. "Moth."



**INTERESTED SPECTATORS:** Flight-Lieut. J. Lawson and Mr. C. R. Fairey.

those officially recognised, and their results, being as follows: Cranwell C.L.A.3; speed over 3 kms., 139.89 km.h. (87 m.p.h.). Speed over 50 kms., 135.5 km.h. (84.25 m.p.h.). "Pixie II": speed over 3 kms., 134.41 km.h. (83.6 m.p.h.). Speed over 50 kms., 137.38 km.h. (85.4 m.p.h.). A.N.E.C., speed over 50 kms. 134.01 km.h. (83.3 m.p.h.).

In the altitude in 30 minutes test the Beardmore "Wee Bee" reached 8,180 ft., the Hawker "Cygnet" 6,450 ft., and the Pander monoplane 4,500 ft. The greatest height without time limit was attained by the "Wee Bee," being 11,800 ft.

During Sunday afternoon a number of short races were held, which were not down on the programme. These were in the nature of private challenges, the first to be flown being between two De Havilland "Moths" over the course used for the 50-km. speed tests and consisting of two laps of this course. One of the "Moths" (G-EBKU) was flown by Capt. Broad, and the other (G-EBKT) by Alan J. Cobham. As was to be expected, the race was a very close one. Both took off across wind, without any apparent difficulty, Cobham flying very low indeed. The first time around Cobham got the lead, Broad losing a little on the turn, and in the finish Cobham won by a short length, or by  $6\frac{1}{2}$  seconds to be exact.

A similar and very excellent race was between Sqdn.-Ldr. Haig on the "Pixie III" and Wing-Commander Douglas on the red D.H. 53 (G-EBHX). The pilots tossed for position and Haig got the inside, thus gaining a slight advantage, which he made the most of in starting. This race was won by Haig by such a short lead that Mr. Reynolds was unable to time the difference between the two machines in crossing the finishing line, Haig's lead being estimated to be about 2 ft.!

Less interesting was a race between Broad on a "Moth" and Flight-Lieut. Chick on the "Hurricane." This race was of one lap only, and was won by a couple of lengths by Broad, who scored heavily in the take-off and also, although to a smaller extent, in cornering.

A most amusing race had been arranged between the large de Havilland 54 passenger machine with 650 h.p. Rolls-Royce "Condor" and a D.H. 53 with 10 h.p. Blackburne, but at the last moment it was discovered that the propeller of the 53 was split, and the race had to be changed to one

between the 54 and a D.H. "Moth." This race consisted of two laps of the 50 km. course (a total distance of about 21 miles), in which Cobham on the "Moth" received a start of 1 min. 59 secs. from Broad on the D.H. 54. Broad, by the way, was carrying a full complement of passengers. Cobham's machine was naturally a good deal more manoeuvrable than its "big brother," and he made splendid turns, although Broad's cornering on the 54 was also good, considering the size of the machine. The race was won by Broad at a speed of 166.41 km.-hr. (103.5 m.p.h.), while Cobham's speed was 123 km.-hr. (76.6 m.p.h.).

A race between Haig on the "Pixie III" and Chick on the "Hurricane," in which Chick gave Haig 48 seconds start, was won by Chick by about one length.

An exhibition of "crazy" flying was then given by Longton on the Martinsyde A.D.C. 1, and, as ever, Longton's flying was extremely amusing and occasionally exciting. The greatest excitement of all was provided at the finish, when, in coming in to land, Longton "lost his prop" (No, the propeller did *not* come off in the air), and, being in danger of charging a fence, "hoiked" his machine over it in fine style and came to rest somewhat bumpily, a couple of wires in the undercarriage being broken, but no other damage done.

Shortly afterwards Courtney came out on the Armstrong-Whitworth "Siskin" and caused the spectators to gasp by his amazing manoeuvres, the most popular of which consisted in "skating" across the aerodrome at low height on the side of the fuselage; at any rate, no other part of the machine seemed capable of giving any lift in that attitude. With machines capable of vertical climbs, as the "Siskin" seems to be, why worry about helicopters?

M. Raparlier brought out the Pander monoplane and did stunts at a low height, but it was quite obvious that the engine was not giving anything like the power it should, as the machine did not fly nearly as strongly as the one which visited Croydon some time ago. It seemed a great pity that the little Pander should be handicapped in this fashion by a "dud" engine. While Raparlier was up, Mr. L. Tait Cox came out on one of Major Savage's sky-writing S.E. 5's and proceeded to carry out various manoeuvres at a low height emitting red "smoke" the while. It seems pretty safe to assume that never before has sky-writing been seen at such a low altitude, and to the technically minded there was a good deal of interest in watching the "hooks" formed by the smoke as a result of vortices produced by various manoeuvres.

*Monday, August 3.*—A very extensive programme was planned for today, and, thanks to excellent weather, it was found possible to carry out the entire list without having to abandon any of the events scheduled. In order to enable the programme to be carried out, racing commenced at 10 a.m., and consequently during the morning the attendance



**DISCUSSING THE CHANCES:** Capt. Kingwill, pilot of the "Wee Bee," in conversation with Mr. F. N. St. Barbe.

was not quite as good as it might have been. The first event was the

**International Handicap (100 miles),** open to all aeroplanes, without restriction on engine weight.

As a very large number of entries had been received, this event was flown in two heats and a final, the first heat commencing at 10 a.m.



**AN A.D.C. GROUP:** Mr. Perry, Major Stewart and Capt. Walker, standing by the A.D.C.I., on which Perry and Longton gave exhibition flights.

The machines entered for the first heat were:—

Pilot.	Machine and Engine.	Handicap.
		m. s.
Bulman ..	Hawker "Cygnets"; Bristol "Cherub"	38 46
Boyes ..	D.H.53, "Scorpion"	33 33
Parker ..	Short "Satellite"; Bristol "Cherub"	32 45
Chick ..	Farnborough "Hurricane"; Bristol "Cherub"	29 11
King ..	Sopwith "Gnu"; 110 Le Rhone	20 56
Holmes ..	Bristol "Lucifer"	20 10
Hinkler ..	Avro "Lynx"	9 54
Campbell ..	Bristol "Bloodhound"; Bristol "Jupiter"	1 8
Hamilton	Martinsyde F.6, "Viper"	.. Scratch

There were two non-starters in this event: Boyes on the D.H.53 (G-EBHZ) and Parker on the Short "Satellite."

All of the machines got away without any trouble, and nearly all the pilots made excellent turns. Chick on the Farnborough "Hurricane" gave up after covering the first lap, but the remaining six machines covered the course. The race had not been long in progress before it became evident that Holmes on the Bristol "Lucifer" school machine was flying an excellent race and was rapidly gaining on his rivals. It was equally obvious that Hamilton on the Martinsyde F.6 was handicapped right out of the race, nor did the fact that he appeared to fly a rather bad course tend to improve his chances. This applied particularly to the earlier laps, and as time went on Hamilton's course got better and better, so that one received the impression that when he started in the race he was not very familiar with the course and the turning points.

Bulman on the Hawker "Cygnets" also flew a remarkably good course, and covered his laps with extraordinary regularity, shortening each lap-time by a few seconds. It became clear that if Bulman's engine would stand up to the work, the race was likely to be a very close one between Bulman and Holmes. Campbell on the Bristol "Bloodhound" appeared at first to have been somewhat unfairly handicapped, but as lap followed lap it was discovered that he was rapidly overtaking the machines in front of him. Hinkler on the Avro "Lynx" was not making the headway he should have been, assuming the handicapping to be correct, and as he was obviously flying a very good course and losing nothing at the turns, it would seem that the handicapper had been somewhat optimistic as to the speed of the Avro "Lynx." With so many pilots doing really excellent cornering it is very difficult to single out any particular one, but we think that perhaps the prettiest of all were the turns made by King on the Sopwith "Gnu." It is literally true to say that King, turning with his

left wing tip two or three feet from the ground, never wasted a foot on his turns. Bulman on the "Cygnets" was lapping at approximately 75 m.p.h., and right up to about half-way in the last lap it seemed to be a toss-up whether he or Holmes on the "Lucifer" would come in first. Bulman ultimately proved to be the winner, with Holmes on the "Lucifer" second, and Campbell on the "Bloodhound" third. Hamilton on the Martinsyde F.6 was so badly out of it that he flew his last lap all alone, the rest of the machines having already covered the course, and landed.

The second heat of the International Handicap commenced at noon and had drawn the following list of entrants:—

Pilot.	Machine and Engine.	Handicap.
		m. s.
Twins ..	Bristol "Brownie"; Bristol "Cherub"	40 20
Raparlier	Pander type D, Anzani ..	32 45
Broad ..	D.H.60 "Moth," "Cirrus"	24 36
Cobham ..	D.H.60 "Moth," "Cirrus"	24 36
Courtney ..	"Pixie II," Blackburne	22 31
Comper ..	C.L.A.3, Bristol "Cherub"	21 31
Youell ..	Airdisco "Avro," Airdisco	15 54
Phillips ..	Sopwith "Scooter," Clerget	1 44

The number of machines in this heat was reduced to eight by the non-starting of four competitors: Douglas on the D.H.53, Haig on the "Pixie III," Kingwill on the "Wee Bee," and James on the A.N.E.C.

From a spectacular point of view, this race was, perhaps, the most interesting event of the meeting: the machines repeatedly getting bunched together at the aerodrome turning point. On one occasion a collision in the air was narrowly averted. Youell on the Airdisco "Avro" reached the turning point about one length ahead, followed by Cobham on one of the "Moths," and by Uwins on the "Brownie," these two being almost side by side as they swung round the tent, and were closely followed by Broad on the other "Moth." During the actual turn round the tent Cobham had apparently intended to cut his corner as fine as possible, but so had Uwins, and as the latter came in first, Cobham, who was slightly below Uwins' starboard wing, had to give way, the machines getting uncomfortably close together, Cobham's upper left wing tip being underneath Uwins' right wing tip. Apparently Cobham saw the danger in time, and he swung to the right slightly to avoid a collision. All this, of course, happened in the space of a couple of seconds, and but for the fact that the writer of these notes happened to be standing at the actual turning point at the time, it is doubtful if the incident would have been observed, and it is unlikely that the actual position was realised by those in the enclosures.



**IN TOUCH WITH THE TURNING POINTS:** Col. Bristow in the wireless tent sending instructions to the observers at Postling and Hastingleigh.

Uwins on the Bristol "Brownie" was as usual making perfect turns, as were also Broad and Cobham on the two "Moths," both flying fairly low, and Cobham particularly so. Broad got into a position shortly behind Cobham, in which it was somewhat difficult for him to cut his corners quite as close as he might otherwise have done. Courtney on the "Pixie II" was doing vertically-banked turns in



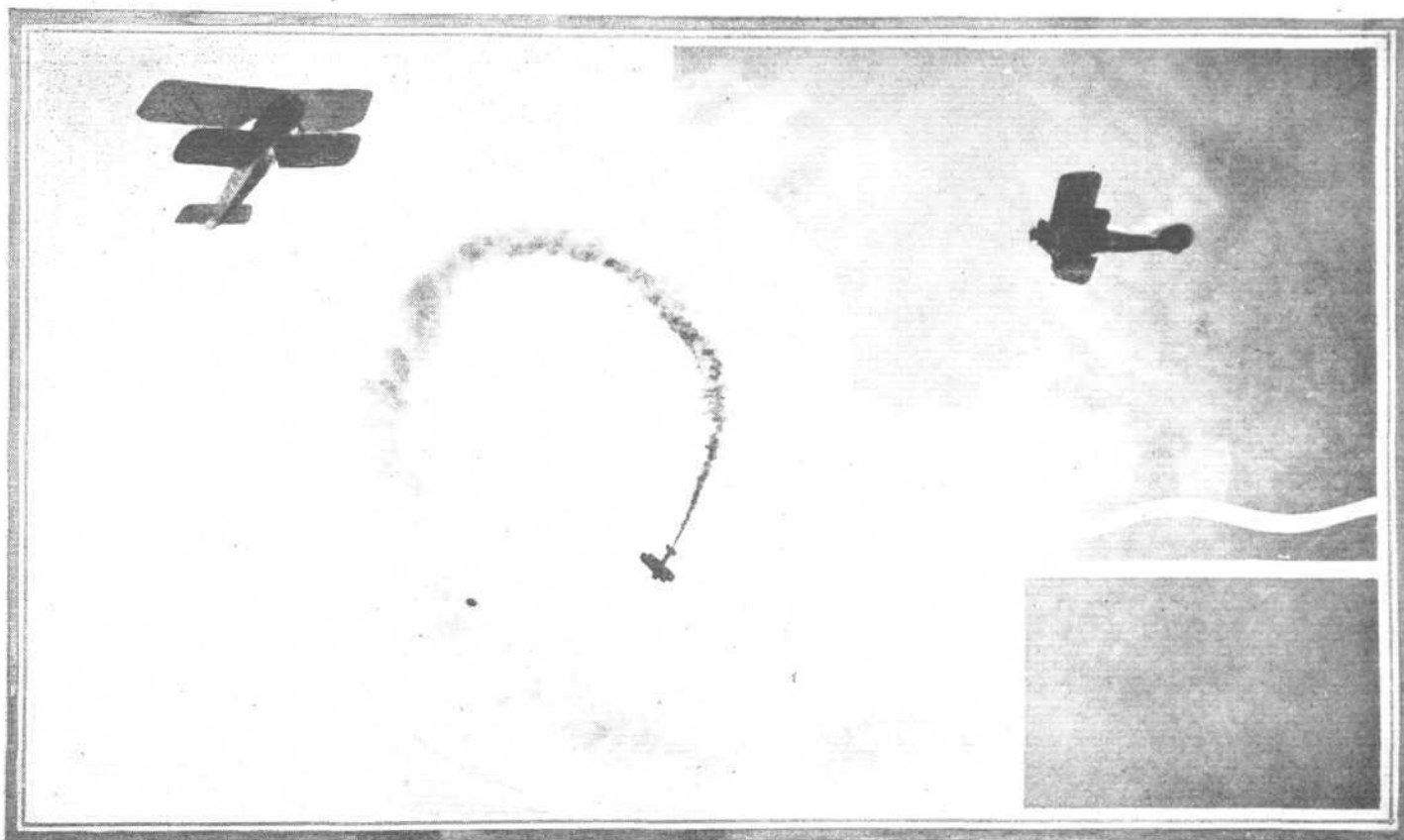
After the machine had been assisted out of the ruts it got away extremely well. The Master of Sempill, who was piloting Broad's "Moth," carried his wife as passenger. He made a good get-off, but appeared to take his turns rather wide, whether out of consideration for Mrs. Sempill one does not know. But 49 seconds separated Courtney on the Pixie II, and "Jimmy" James on the A.N.E.C., yet by reason of the long run and wide turn required by James, Courtney actually managed to get first across the starting line. Comper on the Cranwell was going very strong despite the great amount of flying which his machine and engine had already done. Uwins and Bulman were favourites in this race, it being soon evident that Hinkler could stand small chance of getting in first, provided no trouble overtook Uwins and Bulman. Already, at the end of the second lap, Hinkler had been overtaken by these two. At the end of the third lap Bulman had overtaken Uwins, although the latter managed to maintain second place for several more laps. Comper in the meantime was

fitted with "Bristol" "Cherub" engines, as was also the fourth machine home—the "Wee Bee" flown by Kingwill.

#### The Private Owners' Race

The Lympne meeting of 1925 will probably go down to history as the first occasion on which a race for privately-owned aeroplanes was held. It does not very much matter that the race was not a particularly interesting one and that the handicapper failed to arrange for an exciting finish. The outstanding fact is that such an event took place, and we must congratulate the Royal Aero Club on the touch of imagination, not to say vision, which led them to inaugurate it.

This first race of its kind evoked nine entries and seven actual starters. Mr. R. L. Preston's B.E.2E. could not obtain an airworthiness certificate and so did not put in an appearance at Lympne. The D.H.53, with "Scorpion" engine, which Flying Officer G. E. F. Boyes had been racing throughout the meeting, had had a forced landing in the race



**THREE ENTERTAINERS :** On the left, Courtney on the Armstrong-Whitworth "Siskin," setting out on a demonstration flight. On the right, Perry on the Martinsyde A.D.C.1. In the centre, Tait-Cox on one of the Sky-writing S.E.5's, showing the shape of his loops by means of a smoke trail.

flying a magnificent race, his cornering being very near perfection, and he was gradually overtaking those in front of him. Chick, on the Farnborough "Hurricane," was also forging ahead rapidly, and, for a time, it looked as though the order of finishing would be Bulman, 1st; Uwins, 2nd; and Chick or Comper, 3rd. James was obviously hopelessly outclassed, and at the end of his fourth lap he came in to land. He made what looked like a perfectly normal landing, but as the machine was running along the ground fairly slowly, the wheels got into a rut and the A.N.E.C. stood on its nose, remaining in this position until willing helpers rushed out to release Jimmy. It was found that his propeller was broken, but that otherwise no damage had been done. In view of the trouble Jimmy had been having with his props it may be assumed that he was rather pleased to know that that particular prop at any rate would worry him no more.

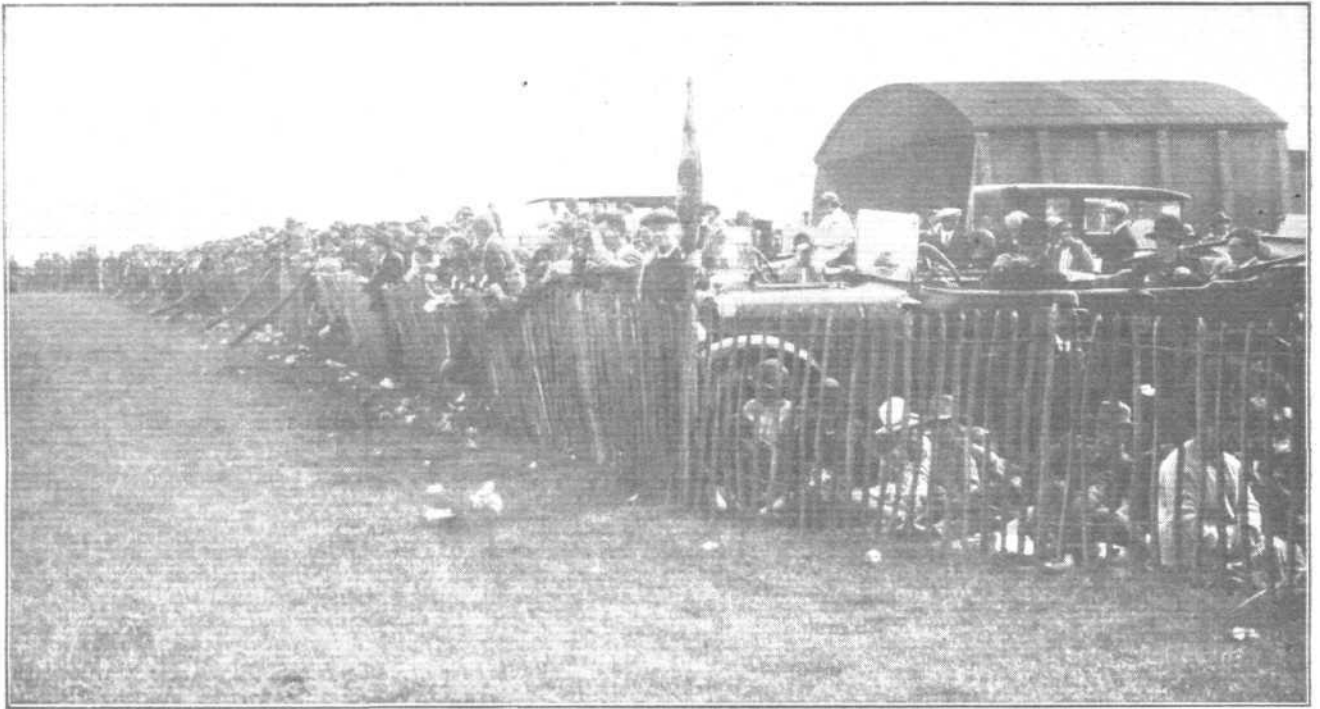
Just as the Hawker contingent was beginning to hope for another victory, their hopes were dashed to the ground by the non-appearance of Bulman on his seventh lap. It was afterwards found that he had landed close to one of the D.H.53's, and that no damage was done, but he lost the race, of course. With Bulman out of the running there was considerable uncertainty as to who would win, but in the end Chick got in first on the Farnborough "Hurricane," with Uwins second, on the Bristol "Brownie," and Comper third on the Cranwell C.L.A.3. All three machines were

for the Grosvenor Cup, and was not available. The other seven duly toed the line. The list is as follows—

Pilot.	Machine and Engine.	Handicap.	
		m.	s.
Chick ..	Farnborough "Hurricane," "Cherub"	14	35
Soden ..	Austin "Whippet," Anzani ..	13	52
Dr. Reid ..	S.E.5A, Renault ..	12	31
Comper ..	Cranwell C.L.A.3 "Cherub" ..	10	45
King ..	Sopwith "Gnu," Le Rhone ..	10	28
Phillips ..	Sopwith "Scooter," Clerget ..	00	52
Hamilton ..	Martinsyde F.4, "Viper" ..	..	Scratch.

There had been some doubt as to whether the "Whippet" would race. Mr. Soden had had serious engine trouble on his way down to Lympne, the first he had had for years. However, after replacing various parts he decided to start. A misunderstanding, however, arose in consequence of this, and he was actually sent away fifth instead of second, and the effect of starting the handicap so that the finish should be a real finish was spoiled. The "Whippet" came home fifth, but on its time allowance was given second place, a reversion to the deplorable habits of yacht racing.

We have said that the race is destined to make history. The competitors had already done so. There were two of what may be described as Lympne machines (we sternly decline to call them "Lympnatics"! ), each flushed with a



WHO IS WINNING ? : View of the Enclosures at Lympe.

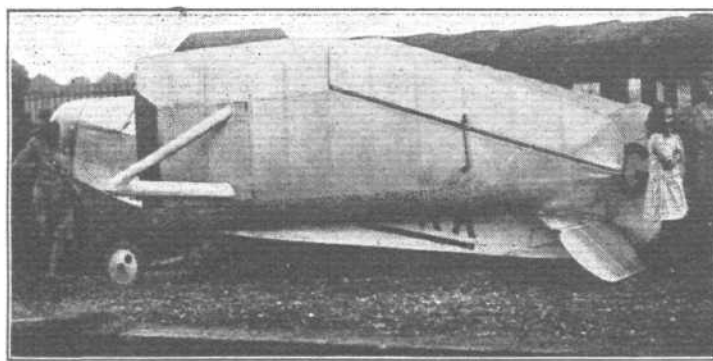
victory in the present meeting (the Cranwell in the single-seater race, the "Hurricane" in the Grosvenor Cup), and the other five were distinctly anti-Lympne. But two at least of the machines had attracted the attention of the public before. The Sopwith monoplane was once stunted by H. G. Hawker at Hendon, in 1920, and the yellow Martinsyde was flown into second place by Raynham in the first King's Cup race in 1922.

The race itself does not call for much description. It consisted of four laps of the course, and resulted in a procession. In the third lap the Martinsyde passed the Sopwith which was taking its corners very wide and almost flat. There was no other change of position. Chick flew high as he had been doing throughout the meeting, and, as the wind had dropped almost entirely, his machine was not

upset by these tactics. Comper drove his new stylish parasol monoplane hard after the veteran mount of the flying doctor, but the latter kept his place and was accounted third after Soden's "Whippet" had been declared second. The Farnborough Club thus secured its second win in the meeting, and well deserved its success. But we offer especially cordial congratulations to the second and third, as Mr. Soden and Dr. Whitehead Reid are private owners in the fullest sense of the word, and the latter is a professional man, not a member of the Royal Air Force. It is that type of owner-pilot which we wish to see increase in numbers, and we only regret that no third prize was offered in this race.

The flying times of the first three over the 50-mile course were :—

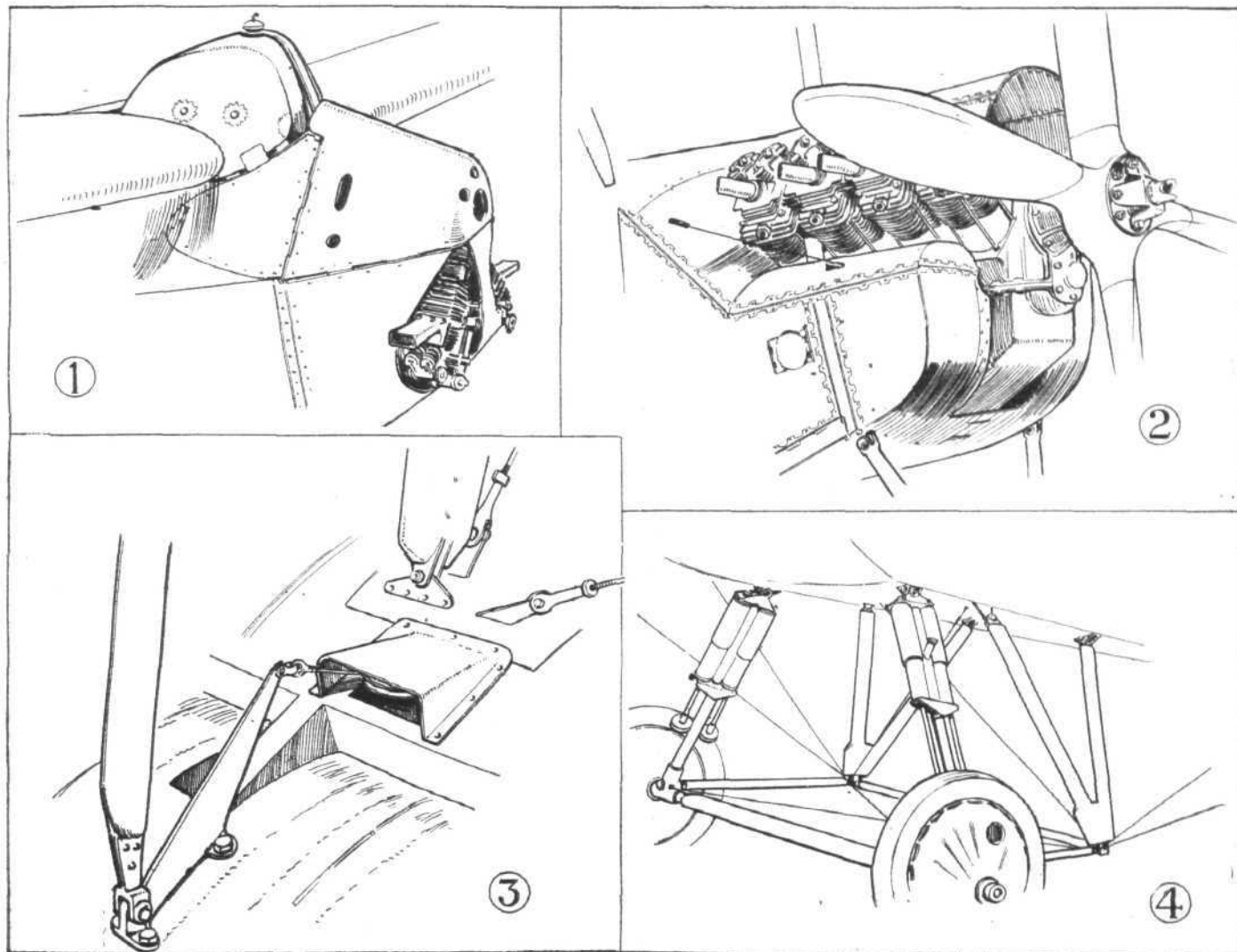
Chick, 36.47 ; Soden, 37.6 ; Reid, 36.3.



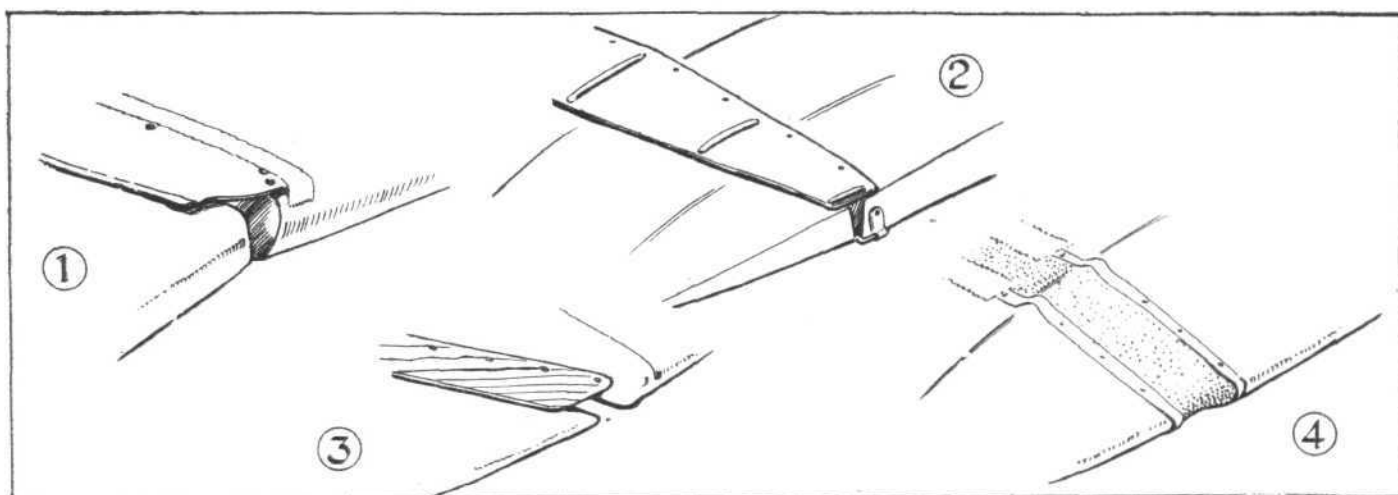
GOODBYE LYMPNE : The Parnall "Pixie III," waiting for the Southern Railway.



## FEATURES OF SOME OF THE LYMPNE MACHINES



A FEW DETAILS AT LYMPNE: 1. The enlarged petrol gravity tank on the A.N.E.C. monoplane. 2. The Airdisco engine and its mounting in the Avro 504. 3. The unusual aileron crank and pulley arrangement on the Bristol "Bloodhound," 4. The Oleo under-carriage of the Avro-Lynx is characterised by a very long travel.



"STOP THAT LEAK": Different methods of closing the gap between rear spar and aileron in some of the Lympne machines. 1. In the Beardmore "Wee Bee" an aluminium strip is used with edges turned over for stiffening purposes. The front edge is covered by fabric strip doped on. 2. In the A.N.E.C. an aluminum strip is used, stiffened by fore-and-aft corrugations, while in 3, the Parnall "Pixie II" three-ply is employed, and in 4, the Cranwell monoplane, rubber strip. This was later removed as it tended to cause the controls to work stiffly.

# PERSONALS

## Married

Flying-Officer R. J. MONTGOMERY-MOORE, R.A.F., was married on July 24, at St. Charles, Hull, to MARJORIE, second daughter of Mr. and Mrs. HERBERT MEEK, of Hull.

## To be Married

Flying-Officer IAN A. BERTRAM, R.A.F. (late R.N.), will be married to Miss DOROTHY CECIL ELIOTT LOCKHART on Tuesday, August 25, at Christ Church, Lanark.

MR. BERNARD G. POOL, R.A.F., and Miss INES HARKER, elder daughter of Mr. and Mrs. Edward Harker, British Consulate, Valencia, Spain, will be married quietly at St. Mark's Church, Chatham, on August 8, at 12.45 p.m.

A marriage has been arranged, and will shortly take place, between Flight-Lieut. W. G. WESTON, M.B., Ch.B. (Edin.), R.A.F., eldest son of the late W. J. Weston and Mrs. Weston, of Taranaki, New Zealand, and Mrs. GEORGE PARSONS, of 8, Albert Hall Mansions, Kensington Gore, S.W.7.

The wedding of Mr. ROBERT DARLEY WHELAN, R.A.F., and Miss BARBARA MARION CELIA WREY, younger daughter of Sir Bouchier and Lady Wrey, is to take place at All Saints' Church, Brenchley, Kent, on August 12.

The marriage of Squadron-Leader G. G. A. WILLIAMS, R.A.F., third son of the late Capt. G. S. Williams, 8th Hussars, and KATHLEEN MARY, daughter of the late Lieut.-Col. G. K. Ansell, 5th Dragoon Guards, and Mrs. Ansell, will take place at St. Andrew's Church, Rugby, at 2.30, on September 2.

## IN PARLIAMENT

### Royal Air Force and British Fascisti

MR. S. SMITH asked the Secretary of State for Air if he is aware that men of the Royal Air Force are being asked to join the organisation of the British Fascisti; and whether activities of this character are permitted under the Regulations of the Royal Air Force?

Sir S. Hoare: I understand that invitations to join the organisation referred to have been received in a few cases by Royal Air Force personnel. It is considered undesirable that officers and airmen should belong to this or any similar organisation, and instructions in this sense are about to be issued.

### Royal Air Force and Foreign Steel

MR. DENNISON, on July 23, asked the First Lord of the Admiralty whether, having regard to the fact that in connection with certain work now being carried out on H.M.S. *Vindictive* at Chatham Dockyard, steel bars of foreign origin are being used, he will state the reason for this?

Sir S. Hoare: I have been asked to reply to this question, which relates to some special work carried out by the Admiralty on behalf of the Air Ministry. Steel of particular sections was required for the work, which is of an experimental nature, and as British steel is not made up in the sections required, and a delay and expense would have been incurred if British steel had been specially made up, it was decided to employ foreign steel, which is already made up in the sections required. The total amount needed was roughly a ton and a half, and the cost approximately £25.

### Air Ministry (Cattewater) Seaplane Station (re-committed) Bill

Considered in Committee, and reported, without Amendment. Motion made, and question proposed, on July 24, "That the Bill be now read the Third time."

REAR-ADMIRAL SIR REGINALD HALL: May I ask the hon. and gallant gentleman in charge of the Bill a question or two? Can he inform me whether there is any other land in the vicinity which could be used for this purpose, and whether in acquiring this land the Admiralty have been consulted and have agreed that this is a suitable spot on which seaplanes can be worked with advantage to the combined Air Force and Navy?

The Under-Secretary of State for Air (Maj. Sir Philip Sassoon): The land which it is proposed to take over is for the making of a seaplane station. This seaplane station is absolutely essential for the west aerial defence of the South of England. I can assure the hon. and gallant gentleman that there is no other land in the neighbourhood which could be acquired for the purpose, and there is no land at all suitable for the making of land aerodromes. The Admiralty have been consulted and are in entire agreement with the Air Ministry on the subject.

Sir Frederic Wise: With regard to the breakwater, do I understand that it belongs to the Air Ministry? I notice that in the White Paper it is stated "the average annual cost of maintenance of the breakwater and the light is estimated at £500, and the construction of the road is estimated to cost £1,500." Does that £500 a year go on indefinitely?

Sir P. Sassoon: The Air Ministry, as a matter of fact, have already been in possession of the breakwater, and the object of the Bill is merely to transfer the responsibility in a legal way. We have always been under an obligation to maintain this light for the purpose of safety on that part of the coast. The actual cost of maintaining the breakwater is very small.

Sir F. Wise: The breakwater belongs to you?

Sir P. Sassoon: Yes. Commander Williams: This district happens to be a historic district and there are certain sites in the neighbourhood which are of very great historic value. Will the Air Ministry exercise every effort possible to preserve these historic sites?

Sir P. Sassoon: Yes, certainly. We are fully alive to the importance of maintaining the amenities and historic associations of that part of the country, and the hon. and gallant member can rely on our doing everything we can in that direction.

Mr. Hardie: Have the Ministry considered the possibility of using cliff caves for the purpose instead of appropriating land on which food could be grown? There would be greater safety in such a method.

Sir P. Sassoon: We are considering that, but there are great difficulties in the way of underground hangars from the point of view of cost. The whole question is being gone into, and I could not make any statement usefully about it now.

Question put, and agreed to. Bill read the Third time, and passed.

### R.A.F. Uxbridge Depot

LIEUT.-COL. JAMES, on July 27, asked the Secretary of State for Air the number of ranks and ratings in the Royal Air Force Depot at Uxbridge?

The Secretary of State for Air (Sir Samuel Hoare): The strength of the Royal Air Force Depot, Uxbridge, on June 30 last was 170 officers and 1,549 airmen; this figure includes 127 officers who, though technically on the strength of the depot and posted there for various reasons (namely, sickness, employment on courses of instruction at universities and elsewhere or on other special duty) are not borne against the establishment of the depot or actually employed there, 1 officer and 95 airmen belonging to the Royal Air Force Central Band, 727 recruits under training, and 202 airmen awaiting posting or on leave pending discharge.

### Air Ministry Education Officers

LIEUT.-COL. JAMES, on July 28, asked the Secretary of State for Air the number of education officers employed in the Air Service, grades I, II, III and IV, giving the totals of each; the total salaries paid to these officers, including allowances; and the total cost of maintaining the schools and lecture rooms where these officers impart instruction?

Sir S. Hoare: The information required by the first and second parts of the question is as follows:

Education Officers.	Number.	Total Salaries.
Grade I	5	£4,280
Grade II	13	8,890
Grade III	66	29,167
Grade IV	33	10,586

There are, in addition, four special appointments (one administrative, three professional), the emoluments of which total £4,210. As regards the last part of the question, the estimated expenditure for 1925-26 for maintenance and upkeep of the equipment, school and lecture rooms, reference libraries, etc., is, approximately, £10,000.

### Transfers of Officers to Reserve

CAPTAIN BRASS, on July 29, asked the Secretary of State for Air how many flying officers who were granted short-service commissions in 1919 and 1920 have now been transferred to the Reserve; and how many more are due for transference in 1925 and 1926, respectively?

Sir S. Hoare: On the assumption that in referring to flying officers my hon. and gallant Friend has in mind officers of the general duties branch, the answer to the first part of the question is 234, to the second, that 19 more are due for transfer to the Reserve during the remainder of 1925, and 151 during 1926.

### Commissions

CAPTAIN BRASS asked the number of short-service commissions granted in 1919 and 1920, respectively, to the flying personnel of the Air Force; and how many of these officers have since been granted permanent commissions?

Sir S. Hoare: On the assumption that in referring to flying personnel my hon. and gallant Friend has in mind officers of the general duties branch, the answer to the first part of the question is 558 in 1919 and 253 in 1920, to the second, 190.

Captain Brass: Do I understand that my right hon. Friend means by the general duties branch only those officers who actually fly?

Sir S. Hoare: Generally speaking, that is the case.

### Wireless Men for Aircraft

THE Admiralty announce that a limited number of volunteers is required from the wireless branch of the Navy for duty as operators and aerial gunners in aircraft of the Fleet Air Arm. Accepted candidates will be required to undergo a course of training in aircraft W/T sets and in aerial

gunnery. Extra pay of 1s. a day during preliminary training, and thereafter 2s. a day continuously whilst detailed, is given. Applications, with copies of certificates, are to be sent to the Signal School, Portsmouth, at the earliest possible date. Men who have volunteered on previous occasions may apply again.

# THE ROYAL AIR FORCE

London Gazette, July 28, 1925.

## General Duties Branch.

The following are granted short service commissions as Pilot Officers on probation, with effect from, and with seniority of, July 18: H. B. M. Barton, R. Connor, A. C. Foreman, E. J. George, S. J. Gilbert, J. D. Greaves, P. E. Grenfell, F. W. H. Hall, A. V. Harvey, A. E. Hill, F. S. Hodder, G. H. C. Ingle, W. T. Jones, G. H. C. Keay, H. J. F. Kempthorne, J. C. Lewis, T. K. Merrett, S. F. Prince, F. O. W. Stokes, J. W. Stokes, D. S. Thomas, G. H. Walker, A. W. Whitta, R. A. Wills, F. G. S. Wilson, J. N. Young.

Lt. A. G. Boon, The Royal Scots, is granted a temp. commission as Flying Officer on seconding for four years' duty with R.A.F. (July 18). Lt. J. Hadden, The Black Watch, is granted a temp. commission as a Flying Officer on seconding for four years' duty with R.A.F. (July 18). Pilot Officer on prob. A. O. Pollard, V.C., M.C., D.C.M., is confirmed in rank (July 1). Flight Lt. W. F. Floyd is placed on the retired list (July 27).

The following are transferred to the Reserve:—Class A.—Flight Lt. M. D. Nares, A.F.C. (July 26). Flying Officer F. J. E. Feeny, D.S.O. (July 29) Class C.—Flying Officer J. G. Argles (July 7).

The short service commission of Pilot Officer on prob. E. Stanier is terminated on cessation of duty (July 29). Flying Officer H. J. Storey is dismissed the service by sentence of General Court Martial (July 13).

## Medical Branch.

Flight Lt. A. E. Henton relinquishes his temporary commission on ceasing to be employed and is permitted to retain his rank (July 8). The following Captains, Army Dental Corps, are granted temp. commissions as Flight Lts. on attachment for four years' duty with R.A.F. (July 1). They will continue to receive emoluments from Army funds:—M. J. O'Reilly, S. A. McCormack, P. P. Hogan.

The following Flight Lts. (Capts., Army Dental Corps) relinquish their temp. commissions on return to Army duty (July 1):—G. F. Charles, L. Somerville-Woodiwis, J. H. W. Fitzgerald.

## Reserve of Air Force Officers.

The following are granted commissions on prob. in Class A, General Duties Branch, in the ranks stated (July 28):—Flying Officer; H. W. Smith. Pilot Officers: J. Gallacher, H. R. Hayden, H. Tulloch.

The following are confirmed in rank:—Flying Officers: S. B. Croydon (July 9); W. E. G. Cutler, W. E. Gandell, M.M., L. E. Owen, R. B. B. Sievier, M.C., R. B. Tapp (July 27). Pilot Officers: M. C. Kerr (July 12); E. F. S. Hughes, C. R. A. Page, W. G. Robinson, E. M. Stewart (July 27).

Flight Lt. P. A. de Fontenay, D.F.C., is transferred from Class C to Class A (June 18). Flying Officer G. S. Coggan is transferred from Class A to Class B (July 28).

## ROYAL AIR FORCE INTELLIGENCE

**Appointments.**—The following appointments in the Royal Air Force are notified:—

### General Duties Branch.

**Air Commodore.**—F. V. Holt, C.M.G., D.S.O. to H.Q., Air Defences of Great Britain for duty as Chief Staff Officer. 23.7.25.

**Group Captain.**—C. R. S. Bradley, O.B.E., to Inland Area Aircraft Depot, Henlow, pending taking over command. 21.7.25.

**Wing Commanders.**—P. Babington, M.C., A.F.C. to Station, H.Q., Duxford, to command. 21.7.25. R. J. Mounsey, O.B.E., to Mechanical Transport Repair Depot, Shrewsbury, pending taking over command. 27.7.25. R. B. Maycock, O.B.E., to Marine Aircraft Experimental Estab., Felixstowe, pending taking over command. 3.8.25.

**Squadron Leaders.**—R. Collishaw, D.S.O., O.B.E., D.S.C., D.F.C., to No. 23 Sqn., Henlow. 1.7.25. A. F. Brooke, to No. 43 Sqn., Henlow. 1.7.25. D. E. Stodart, D.S.O., D.F.C., to R.A.F. Depot on transfer to Home Estab. 28.6.25.

**Flight Lieuts.**—F. J. Powell, M.C., to Superintendent of Reserve, Northolt. 9.7.25. H. G. Bowen, O.B.E., to H.Q. Special Res. & Auxiliary Air Force. 27.7.25. R. C. Preston, A.F.C., to No. 502 Sqn., Aldergrove. 29.7.25. G. Martyn to H.Q. Special Res. & Auxiliary Air Force. 27.7.25. R. C. Calvey to No. 43 Sqn., Henlow. 9.7.25. A. P. M. Sanders, to Sch. of Photography, S. Farnborough. 3.8.25. A. G. Jarvis, A.F.C. and G. S. Shaw, to Sch. of Photography, S. Farnborough. 3.8.25. A. W. Clemson, O.B.E., D.S.C., to R.A.F. Depot on transfer to Home Estab. 28.6.25.

**Flying Officers:** W. H. Burbury, H. L. Drake, M. C. Pascoe, and N. A. Platts; all to No. 4 Flying Training School, Egypt, 17.7.25. S. T. Littleton, to No. 1 Sch. of Tech. Training (Boys), Halton, 20.7.25. G. A. R. Muschamp, to H.M.S. Eagle, 16.7.25. H. R. McL. Reid, D.F.C., and G. H. Huxham, to Aden Flight, 24.6.25. J. H. Tanner, to R.A.F. Base, Calshot, 27.7.25. G. Terrell, to No. 6 Sq., Iraq, 28.6.25. A. G. Boon and J. Hadden, to No. 2.

## NAVAL APPOINTMENTS

The following appointments have been notified by the Admiralty:—**Lieuts., R.N. (Flying Officers, R.A.F.).**—Hon. J. M. Southwell, to "Furious," and for 404 Flight (July 30); J. I. Robertson and J. B. Heath, to "Furious," and for 421 Flight (July 30); and H. N. Lay, to "Argus," and for 423 Flight (July 30).

**Lieut. (E).**—H. F. Baker, attached to R.A.F. for period A. (Aug. 10).

### Royal Marines.

**Capt., R.M. (Flying Officer, R.A.F.).**—A. F. B. Alcock, D.S.C., to "Furious" and for 461 Flight (July 30).

**Lieuts., R.M. (Flying Officers, R.A.F.).**—B. M. Knowles and S. C. Woolley, to "Argus," and for 423 Flight (July 30); and R. M. Giddy, to "Furious," and for 421 Flight (July 30).

### Tokyo-London Flight

The two Japanese pilots, Maj. Abe and Mr. Kawachi, who are attempting a flight—organised by the "Asahi"—from Tokyo to London on two Breguet biplanes, arrived at Harbin, Manchuria, from Heijo, on August 2. They had started from Heijo the day before, but were compelled to turn back owing to fog. They left Harbin on Aug. 4 and reached Chita (750 miles) after 7½ hours' flight.

### Arctic Aerial Survey

Two Junkers seaplanes with German and Russian pilots in charge, left Leningrad on Aug. 2 for Novaya Zemlia, with the object of exploring floating icebergs in the Kara Sea.

### Macmillan Polar Expedition

The Macmillan Polar Expedition has arrived at Etah, Greenland, on the two ships "Bowdoin" and "Peary," on August 1. The Loening Amphibians have been landed and are being erected.

### The Air War in Morocco

Brg air raids have taken place against the Riffs in the Spanish zone, with, it is reported, very effective results. Several Riff concentrations have successfully been bombed, with heavy losses to the enemy.

### Giant Mooring Mast for America

An American syndicate has made arrangements for the construction in Detroit of an airship mooring mast 210 ft. high. This will be some 10 ft. higher than the one to be erected by the British Air Ministry, and will thus be the largest mooring mast in the world.

### British and Canadian Air Force Scheme

THE Canadian Government has approved a scheme for the exchange of British and Canadian Air Force pilots, whereby British Air Force pilots will have an opportunity of taking part in the Canadian Flying Services, including such operations as aerial survey, border patrols, forest fire patrols, and fisheries protection.

### Tidworth Torchlight Tattoo

In the spectacular torchlight tattoo, arranged in aid of military charities, by the 2nd Cavalry Brigade, which was held at Tidworth Camp (near Salisbury Plain) on August 1 to 5, all the Services took part, including the R.A.F. The latter's contribution consisted of aerial displays by illuminated aeroplanes.

### The Vauville Meeting

At the Vauville Light 'Plane and Glider Meeting a new world's record has been established by Commandant Massaux, who remained up for 10 hours, 19 mins. 43.4 secs. The greatest altitude attained so far by a light 'plane at the meeting is 3,000 metres (9,750 ft.) by Camgul (Belgian light 'plane). The greatest speed attained over 70 kiloms. (43.4 miles), was 66.6 m.p.h. and stands to the credit of Lacre on Caudron machine with 40 h.p. Salmson engine.

### This Year's Successful Tournament

As a result of this year's Royal Naval, Military and Air Force Tournament at Olympia, about £12,000 will be available for distribution among the Service charities.

## AIR POST STAMPS

By DOUGLAS B. ARMSTRONG

ALBANIA, Austria, Denmark and Ecuador provide the latest additions to the air post collection, which bear witness to the extension of the aerial mail service. The Albanian aero stamps have already been described in this column. Austria's new air post issue comes in two striking designs by Prof. Sterrer, the first of which depicts the head and shoulders of a pilot in his 'bus, and is used for the surface printed values 2 groschen blue, 5 gr. red, 6 gr. deep blue, 8 gr. bright green, and 10 gr. orange. The other type representing an aeroplane and an eagle soaring over the mountain tops, figures upon the denominations 15 groschen lilac, 30 gr. purple, 50 gr. sepia, 1 schilling deep blue and 2 sh. green. The Danish official "Luftpost" stamps are symbolical of Progress, and show a ploughman with his team and an aeroplane flying overhead. They comprise 10 ore yellow-green and 20 ore scarlet, both surface printed in large format. A second-issue of air post stamps from Ecuador is stated to be employed in the service between Quito-Ibarra and Quito-Cuenca. It consists of ten values of the commemorative stamp issue of 1920, overprinted with the device of an aeroplane surmounting the word "Ecuador," in red or black, as follows:—1 centimo green, 2 c. carmine, 3 c. brown, 4 c. dark green, 5 c. blue, 6 c. orange, 7 c. brown, 8 c. yellow-green, 9 c. carmine, 10 c. blue.

### More Swiss Semi-Officials

THE issue of semi-official air post vignettes continues to be a feature of aviation meetings in Switzerland. Aero "Days" at Basel and Geneva are responsible for the latest examples. In connection with the dedication of a military memorial at Basel on May 10, an air mail flight to Zurich took place, the letters bearing in addition to the regular Swiss stamps a special *etiquette* denoting the supplementary fee of 30 centimes. Lithographed in black with a Futurist picture of an aeroplane descending with a huge letter attached to its nose, this label has no indication of value, but bears the inscription "Flugpost Zur Einweihung D. Basel Stadtischen Wehrmandankmal 10 Mai 1925." An official postmark was provided by the Swiss Post Office on this occasion, similarly inscribed to the semi-official stamp. Triangular vignettes of the nominal value 30 centimes red and blue, and 50 c. green and blue, showing a flight of aeroplanes in the centre were provided on the occasion of the International aviation meeting held at Geneva on May 31, and June 1, 1925. These were cancelled with a cachet containing a Geneva Cross within a rosette, but an oblong cancellation with an outline of an aeroplane and the date, at the side, was also employed.

### Air Stamps at Auction

THE ever-increasing popularity of air post collecting is reflected in the keen competition evinced by bidders at the second air post auction, which resulted in some excellent prices being realised as follows:—"Hawker" mint, £48; Halifax-St. Johns, mint pair with inverted overprint, £30; Alcock cover (without London postmark), £18; Handley-Page, Newfoundland, cover superb, £10; German S.W. Africa 1914, flown card, £25; Philippines, 1919, "Ruth Law" demonstration flight card, £11 11s.; two Union of S. Africa Red Cross cards, flown, £9 10s.; Canal Zone, Liberty Loan flight, £7; Nestved, semi-official, unused, £10; the two "R.34," covers being in poor condition sold with about thirty other American air covers for £100.

### Japanese Air Service

AN official air mail service was successfully inaugurated on April 20 between Tokio-Osaka and Osaka-Fukuoka. First flight covers will be scarce as only 198 were carried over the first-named route, and 453 on the second stage. No distinctive stamps or cachets were provided, but letters and cards had to be endorsed with the Japanese word "Hiko" (by air) in red. The air mail operates three times a week in either direction.

### Dakar-Toulouse Air Line

THE opening of the longest air mail route in the world, from Dakar (Senegal) to Toulouse on June 5, 1925, was signalled by the application to letters, which reached Paris on the 10th of that month, of a four-line cachet lettered "Par Avion-Ouverture Ligne Latecoere-Dakar Toulouse."

### German Air Post Catalogue

THE appearance of a comprehensive catalogue of air post stamps and covers in German testifies to the interest that is taken in air post collecting in that country. Those collectors whose knowledge of the language enables them to follow it, will find Herr A. Berezowski's "Handbuch fur Luftpostkunde" an admirable and informative work in all except its pricing, which in many cases is hopelessly out of date.

## NOTICE TO AIRMEN

### Croydon Aerodrome: Alteration to S. Boundary

THE extreme South portion of the Croydon aerodrome (with the exception of the S.E. corner in the vicinity of the aerial pilotage light), which has hitherto been unfit for use, is now suitable for landing purposes.

Consequently, the two red boundary lights, which were previously installed in line with the white boundary markings, have now been moved to a new position against the South boundary fence.

*Air Pilot.*—An amendment to the Air Pilot will be notified. (No. 42 of 1925.)

### Titanine at Lympe

It may be of interest to note that the following competing machines at the Lympe August Meeting were doped with Titanine:—Airdisco-Avro, A.N.F.C. light 'plane, Avro "Avis" light 'plane, Avro-Lynx 504N, Beardmore "Wee-Bee I," D.H. 53 (A.B.C. "Scorpion"), D.H. 53 (Blackburne "Badger I"), two D.H. 60 "Moths," Pander monoplane, and R.A.E. Aero Club monoplane.

## PUBLICATIONS RECEIVED

*Technical Notes of the U.S. National Advisory Committee for Aeronautics:* No. 216.—The Velocity Distribution Caused by an Airplane at the Points of a Vertical Plane Containing the Span. By Max M. Munk. March, 1925. No. 217.—Note on the Air Forces on a Wing caused by Pitching. By Max M. Munk. March, 1925. No. 218.—The Estimation of Airplane Performance from Wind-Tunnel Tests on Conventional Airplane Models. By E. P. Warner and S. Ober. May, 1925. No. 219.—The Comparison of Well-known and New Wing Sections Tested in the Variable-Density Wind Tunnel. By G. J. Higgins. May, 1925. U.S. National Advisory Committee for Aeronautics, Washington, D.C., U.S.A.

*On Driving a Car the Better Way.*—The British Petroleum Co., Ltd., Britannic House, Moorgate, London, E.C. 2.

*Air Ministry Meteorological Office. Report of the Advisory Committee on Atmospheric Pollution. Year ending March 31, 1924.* H.M. Stationery Office, Kingsway, London, W.C. 2. Price 4s. net.

*Notiziario di Aeronautica No. 6. June, 1925.* Commissariato dell' Aeronautica. Direzione Superiore del Genio e delle Costruzioni Aeronautiche, Viale Giulio Cesare, Rome. Price L. it. 50.

*Rendiconti Tecnici della Direzione Superiore del Genio e delle Costruzioni Aeronautiche. June, 1925.* Viale Giulio Cesare, Rome. Price L. it. 40.

## AERONAUTICAL PATENT SPECIFICATIONS

*Abbreviations:* Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

### APPLIED FOR IN 1924

Published, August 6, 1925.

- 8,928. J. G. TAYLOR. Rotary i.c. engine. (236,642.)  
9,424. H. W. HOLLAND and W. MANSFIELD. Release mechanism for dropping bombs, etc., from aircraft. (236,671.)  
11,736. A. PROCOFIEFF-SEVERSKY. Means for supplying aircraft with fuel while in flight. (236,698.)

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